Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.10.96 : ISO 4113

Combination No. : 9 400 087 500

Injection pump

Pump designation : PES6P120A720LS7257

: -10

EP type number : 9 400 087 086

Governor

Governer design. : RQV300...950PA1242

: 9 420 080 387 Governer no.

Cust. part No. : 0260746602

Customer-spec. information

Customer

: MBB

Motor

: OM 447 LA

Power KW : 264.8

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

A01

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.65 : +- 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 21.00

: 6-2-4-1-5-Firing order

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

: +- 0.50 tolerance *NW

BASIC SETTING

600 Rated speed rpm :

Rack travel in mm: 14.25

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 275.5

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

4.0 : +--

Spreed

cm3/1000 strokes : 5.0

Check tolerance		+	
cm3/1000s.	: 9.0	Rated speed rpm Aneroid pressure	
Rated speed rpm	: 300	→ hPa	: 1300
		Del. quantity cm3/1000 strokes	: 275.5
Rack travel in mm		+ cm3/1000 strokes	: +- 1.0
Tolerance mm Del. quantity		Check tolerance cm3/1000s.	: +- 4.0
cm3/1000 strokes		+ Spreed	
cm3/1000 strokes Check tolerance	: + 3.0	cm3/1000 strokes Check tolerance	: 5.0
cm3/1000S. Spreed	: +- 6.0	cm3/1000s.	: 9.0
cm3/1000 strokes	: 8.0	+	
Check tolerance	: 12.0	CONTROL LEVER	
cm3/1000s.	. (4.0	T CONTROL LEVER	
		- control lever	
(B) SETTING OF IN	NECTION PUMP	+ position degree	
WITH GOVERNOR		tolerance degree	: +- 4.0
· · · · · · · · · · · · · · · · · · ·		control lever	
GUIDE SLEEVE TRAV	EL	position degree	
6	. 1050	tolerance degree	: +- 4.0
Rated speed rpm guide sleeve	: 1050	RATED SPEED	
guide steeve travel mm	: 7.80	I MIED SPEED	
Tolerance mm		+ rack travel mm	: 12.60
to to the	J. 10	Rated speed rpm	
Rated speed rpm guide sleeve	: 700	Tolerance 1/min	
travel mm	: 5.45	+ rack travel mm	
Tolerance mm	: + 0.25	Rated speed rpm Tolerance 1/min	
Rated speed rpm	: 300	+ Toterance T/min	: +- 15
guide sleeve	. 355	+ rack travel mm	: 0.50
travel mm	: 0.75	+ Tolerance mm	: 0.50 : + 0.50
Tolerance mm	: ← 0.25	+ Rated speed rpm	: 1230
Rated speed rpm	: 500	‡	
guide sleeve		 	
travel mm	: 3.55	+ LOW IDLE	
Tolerance mm	: ← 0.25	†	
Rated speed rpm	: 1165	control lever	
guide sleeve		position degree	: 82.0
travel mm	: 9.45	tolerance degree	
Tolerance mm	: - 0.25	†	
		+ control lever	. 47.0
CUTAE OF FOUR DOOR	TTON	position degree	
GUIDE SLEEVE POSI	1 TOM	tolerance degree	: +- 4.0
Rated speed rpm	: 1120	Testing:	
Rack travel in mm		Rated speed rpm	: 300
Tolerance mm	: +- 1.30	† rack travel mm	: 5.50
		† Tolerance mm	: +- 0.10
)	
	Y AT FULL LOAD STOP	Rated speed rpm	: 100

T mm min.	: > 9.20	+ Check + speed 1/min : < 240
ted speed rpm		†
rea sheen (.hii)	, JEJ	FUEL DELIVERY CHARACTERISTICS
ORQUE CONTROL		Aneroid pressure
		+ hPa : 1300
ated speed rpm		Rated speed rpm : 950
ack travel mm	: 14.25	+ Del. quantity
olerance mm	: +- 0.05	+ cm3/1000 strokes : 245.5
	050	+ cm3/1000 strokes : $+$ 2.0
sted speed rpm sck travel mm olerance mm	; 95U	+ Check tolerance + cm3/1000s. : + 5.0
ick travel mm	: 13.65	
olerance mm	: +- 0.05	+ Spreed
		+ cm3/1000 strokes : 8.0
ted speed rpm	: 750	+ Check tolerance
ck travel mm	: 14.25	+ cm3/1000s. : 12.0
ck travel mm lerance mm	: +- 0.05	+
		+ Aneroid pressure
ited speed rpm	: 840	+ hPa : 1300
ated speed rpm ack travel mm	: 13.90	+ Rated speed rpm : 750
olerance mm	: + 0.10	+ Del. quantity
		+ cm3/1000 strokes : 265.5
	·	
ROID/ALTITUDE		Check tolerance
PENSATOR TEST		+ cm3/1000s. : +- 5.0
LINDATOR IEST		Spreed
		+ cm3/1000 strokes : 8.0
TTNC		
ING		+ Check tolerance
	===	+ cm3/1000s. : 12.0
ed speed rpm ssure hPa k travel mm erance mm	: 500	†
ssure hPa	: 1300	+ Aneroid pressure
k travel mm	: 14.25	+ hPa : -
erance mm	: +- 0.05	Rated speed rpm : 500
		+ Del. quantity
ASUREMENT		+ cm3/1000 strokes : 146.5
		+ cm3/1000 strokes : +- 1.0
essure hPa	: -	+ Check tolerance
	: 500	- cm3/1000s. : + 4.0
ed speed thii	: 500	Spreed
+ad anaad	. 500	+ cm3/1000 strokes : 5.0
ted speed rpm	. טטכ	+ Check tolerance
anna boa	, 740	
ssure hPa		+ cm3/1000s. : 9.0
k travel mm	: 2.25	Ť
erance mm	: +- 0.15	BREALAN
		† BREAKAWAY
ssure hPa	: 500	†
travel mm	: 0.90	+
erance mm	: ← 0.10	Rack travel in mm: 12.60
		+ Rated speed rpm : 1000
		+ Tolerance 1/min : + 5
T CUT-OUT		1
		
ed speed rpm	: > 100	<u> </u>
ed speed rpm		T STARTING FUEL DELIVERY
rea sheed thiii	. \	I SIMPLIAN LOFE REFLACEL
eck		Rated speed rpm : 100
CK		
1/min	: > 80	+ Del. quantity + cm3/1000 strokes : 236.0

cm3/1000 strokes : +- 10.0 Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 16.5

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : + 6.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 04.10.96 : ISO 4113

Combination No.

: 9 400 087 501

Injection pump

Pump designation : PES5P120A720LS7280

EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1249

Governer no.

: 9 420 080 389

Cust. part No.

: 4750747302

Customer-spec. information Customer : M8B

Motor

: OM 449 LA-EURO I

Power KW

: 220.7

TEST BENCH REQUIREMENTS

Inlet line

: 4.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar

1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm 4.65

: +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 21.00

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.75

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 263.5

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

9.0

Rated speed rpm :

300

k travel in mm	n: 5.30	+ Del. quantity + cm3/1000 strokes	: 263.5
travet in me	; +- 0.10	+ cm3/1000 strokes	
lantity	. += 0.10	+ Check tolerance	, +- 1.0
00 strokes	: 17.0	- cm3/1000s.	: +- 4.0
30 strokes		Spreed	. 1 4.0
tolerance	. — 5.0	cm3/1000 strokes	: 5.0
OOS.	: ← 6.0	Check tolerance	, ,,,
w.	. +- 0.0	+ cm3/1000s.	: 9.0
00 strokes	: 8.0	T clib/1000s.	: 9.0
olerance	: 0.0	†	
oterance OS.	: 12.0	T	
٥.	: 12.0	CONTROL LEVER	
		+	
ING OF IN	NJECTION PUMP	+ control lever	
/ERNOR		position degree	: 52.0
		+ tolerance degree	
		+	
SLEEVE TRAV	/EL	+ control lever	
		position degree	
speed rpm	: 1050	+ tolerance degree	: ← 4.0
il ee ve		+	
mm	: 7.80	+ RATED SPEED	
ce mm	: ← 0.10	+	
		rack travel mm	: 12.70
speed rpm	: 700	+ Rated speed rpm	
sleeve		+ Tolerance 1/min	
mm	: 5.45	+	•
ce mm	: +- 0.25	rack travel mm	: 4.00
· · · · · · · · · · · · · · · · · · ·	 	+ Rated speed rpm	
peed rpm	: 300	+ Tolerance 1/min	
leeve			
mm	: 0.75	rack travel mm	: 0.50
ce mma	: +- 0.25	+ Tolerance mm	: ← 0.50
, 0 1144		+ Rated speed rpm	: 1250
peed rpm	: 500	The state of the s	
leeve	. 300	1	
nn nn	: 3.55	<u> </u>	
nce mm	: + 0.25	LOW IDLE	
100 HMI		+	
speed rpm	: 1165	+	
sleeve		+ control lever	
mm	: 9.45	<pre>position degree</pre>	: 83.0
ce mm	· +- 0.25	+ tolerance degree	; +- 4.0
, W#11		1	, ,,,
		— + control lever	
SLEEVE POSI	TION	+ position degree	: 18.0
		+ tolerance degree	
speed rpm	: 1120	1	
peca i piii		+ Testing:	
mm ni lava	: 16.50		
	: + 1.30	Rated speed rpm	: 300
CC IMIN	. 1.50	rack travel mm	
		Tolerance mm	: + 0.10
AD DEL THED	RY AT FULL LOAD STOP	I roterance min	0.10
NAM MELINEK	T AT FULL LUAD STUP	I Pated speed nom	: 100
	. 700	Rated speed rpm	. 100
speed rpm	: 700	T COT	. \ 0.00
d pressure	. 4700	+ CRT mm min.	: > 9.00
	: 1300	T BEAUTIE IN	. 705
		+ Rated speed rpm	: 325

		+	Check tolerance
		 +	cm3/1000s. : +- 5.0
TORQUE CONTROL		+	Spreed
		+	cm3/1000 strokes : 8.0
Rated speed rpm	: 700	†	Check tolerance
rack travel mm	: 13.75	†	cm3/1000s. : 12.0
Tolerance mm	: +- 0.05	†	Ananaid maaayya
Dated aread par	: 950	†	Aneroid pressure hPa : -
Rated speed rpm rack travel mm	: 13.75	Ī	Rated speed rpm : 500
Tolerance mm	: +- 0.05	I	Del. quantity
TO CET CHILCE THE	0.03	\mathbf{I}	cm3/1000 strokes : 121.0
		\	cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE		1	Check tolerance
COMPENSATOR TEST		1	cm3/1000s. : +- 4.0
		1	Spreed
		1	cm3/1000 strokes : 5.0
SETTING		1	Check tolerance
		1	cm3/1000s. : 9.0
Rated speed rpm	: 500	1	· · · · · · · · · · · · · · · · · · ·
Pressure hPa	: 1300	1	
rack travel mm	: 13.75	1	BREAKAWAY
Tolerance mm	: +- 0.05	1	
•		+	
MEASUREMENT		+	Rack travel in mm : 12.70
		+	Rated speed rpm : 995
Pressure hPa	: -	+	Tolerance 1/min : +- 5
Rated speed rpm	: 500	+	
		+	
Rated speed rpm	: 500	†	OTANTAKO PURI NELTURNY
		†	STARTING FUEL DELIVERY
Pressure hPa	: 800	†	Dotted aread 400
rack travel mm	: 2.85	†	Rated speed rpm : 100
Tolerance mm	: ← 0.15	†	Del. quantity
Danasina LDs	. /.on	†	cm3/1000 strokes : 250.0
Pressure hPa	: 480 : 0.90	†	cm3/1000 strokes : +- 10.0
rack travel mm		†	Check tolerance cm3/1000s. : +- 14.0
Tolerance mm	: +- 0.10	†	CM3/10003. : +- 14.0
····		I	
START CUT-OUT		1	
		+	LOW IDLE
lated speed rpm		+	
Rated speed rpm		+	Rated speed rpm : 300
		+	Del. quantity
heck		+	cm3/1000 strokes : 17.0
speed 1/min	: > 80	+	cm3/1000 strokes : +- 3.0
Check		+	Check tolerance
speed 1/min	: < 240	+	cm3/1000s. : +- 6.0
		+	Spreed
· · · · · · · · · · · · · · · · · · ·		+	cm3/1000 strokes : 8.0
UEL DELIVERY CHA	RACTERISTICS	+	Check tolerance
		+	cm3/1000s. : 12.0
Ineroid pressure		+	
ıPa .	: 1300	+	
Rated speed rpm	: 950	f	
el. quantity	A	+	End of test specification sheet
m3/1000 strokes		+	
m3/1000 strokes	: ← 2.0	†	
		+	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 04.10.96 : ISO 4113

Combination No. : 9 400 087 502

Injection pump

Pump designation : PES6P120A720LS7257

: -10

EP type number

: 9 400 087 086

Governor

Governer design. : RQV300...950PA1262

Governer no. : 9 420 080 394

Cust. part No. : 0260749902

Customer-spec. information : MBB

Customer

Motor

: OM 447 LA

Power KW

: 301.6

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

80A

x inside diameter : 3 x length mm : 1000 3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm

Tolerance mm

Check

: **←** 0.10

tolerance mm

Rack travel in mm: 21.00

Firing order : 6-2-4-1-5-

Phasing

: 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 14.65

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 301.5

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

Rated speed rpm :

300

Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: ← 0.10 : 17.0 : ← 3.0 : ← 6.0	Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever	: +- 1.0 : +- 4.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	position degree tolerance degree	
GUIDE SLEEVE TRAV	/EL	control lever position degree tolerance degree	: 118.0
Rated speed rpm guide sleeve	: 1050	RATED SPEED	
travel mm	: 7.80		477.478
Tolerance mm	: + 0.10	rack travel mm Rated speed rpm	: 13.60 : 990
Rated speed rpm guide sleeve	: 700	Tolerance 1/min	
travel mm	: 5.45	rack travel mm	: 4.00
Tolerance mm	: ← 0.25	Rated speed rpm Tolerance 1/min	: 1130 : +- 15
Rated speed rpm guide sleeve travel mm	: 0.75	rack travel mm Tolerance mm	: 0.50 : +- 0.50
Tolerance mm	: + 0.25	Rated speed rpm	: 1250
Rated speed rpm guide sleeve	: 500	LOW IDLE	
travel mm Tolerance mm	: + 0.25	LOW IDLE	
Rated speed rpm guide sleeve	1	control lever position degree	
travel mm Tolerance mm	: 9.45 : + 0.25	tolerance degree	
roterance mm		control lever position degree	: 17.0
GUIDE SLEEVE POSI	TION	tolerance degree	
Rated speed rpm	: 1120	Testing:	
Rack travel in mm Tolerance mm		Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.50 : +- 0.10
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Rated speed rpm	: 100
Rated speed rpm Aneroid pressure	: 600	CRT mm min.	: > 8.50
hPa	: 1400	Rated speed rpm	: 325

TORQUE CONTROL		
TORQUE CONTROL		
		+ cm3/1000 strokes : +- 2.0 + Check tolerance
Rated speed rpm	; 600	- cm3/1000s. : +- 5.0
rack travel mm		+ Spreed
Tolerance mm	: +- 0.05	- cm3/1000 strokes : 8.0
		+ Check tolerance
Rated speed rpm	: 950	+ cm3/1000s. : 12.0
rack travel mm		†
Tolerance mm	: 0.05	Aneroid pressure
Dotted amond ann	. 750	+ hPa : 1400 + Rated speed rpm : 750
Rated speed rpm rack travel mm	: 14.65	+ Rated speed rpm : 750 + Del. quantity
Tolerance mm		- cm3/1000 strokes : 293.0
roterance min	0.03	- cm3/1000 strokes : +- 2.0
		- Check tolerance
ANEROID/ALTITUDE		+ cm3/1000s. : +- 5.0
COMPENSATOR TEST		Spreed
		+ cm3/1000 strokes : 8.0
		† Check tolerance
SETTING		+ cm3/1000s. : 12.0
_	7 00	†
Rated speed rpm		+ Aneroid pressure
Pressure hPa	: 1400	+ hPa : -
rack travel mm	: 14.65	Rated speed rpm : 500
Tolerance mm	: 0.0 5	+ Del. quantity + cm3/1000 strokes : 146.5
MEASUREMENT		- cm3/1000 strokes : +- 1.0
MEASUREMENT		Check tolerance
Pressure hPa		cm3/1000s. : +- 4.0
Rated speed rpm	· · 500	Spreed
nated speed (pill	. 500	cm3/1000 strokes : 5.0
Rated speed rpm	: 500	+ Check tolerance
		+ cm3/1000s. : 9.0
Pressure hPa	: 1000	+
rack travel mm	: 2.75	
Tolerance mm	: ← 0.15	+ BREAKAWAY
		+
Pressure hPa	: 660	†
rack travel mm	: 1.00	Rack travel in mm: 13.60
Tolerance mm	: +- 0.10	+ Rated speed rpm : 990 + Tolerance 1/min : +- 5
		† Tolerance 1/min : + 5
START CUT-OUT		I
		+
Rated speed rpm	: > 100	STARTING FUEL DELIVERY
Rated speed rpm		+
· · ·		+ Rated speed rpm : 100
Check		+ Del. quantity
speed 1/min	: > 80	+ cm3/1000 strokes : 265.0
Check	. 2/2	+ cm3/1000 strokes : +- 10.0
speed 1/min	: < 240	+ Check tolerance + cm3/1000s. : +- 14.0
FUEL DELIVERY CHA	RACTERISTICS	<u></u>
Aneroid pressure		
4.161.010 DUG2201.6		•
hPa	: 1400	+ LOW IDLE

Rated speed rpm : 300
Del. quantity
cm3/1000 strokes : 17.0
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.10.96 Test oil : ISO 4113

Combination No. : 9 400 087 503

Injection pump

Pump designation : PES5P120A720LS7280

EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1263

Governer no. : 9 420 080 392

Cust. part No. : 0270740102

Customer-spec. information

Customer : MBB

Motor : OM 449 LA-EURO I

Power KW : 206.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.65 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 21.00

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 13.45

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 246.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

Rated speed rpm : 300

Deal Americal discussion E 70	+ Del. quantity
Rack travel in mm : 5.30	+ cm3/1000 strokes : 246.0
Tolerance mm : +- 0.10	+ cm3/1000 strokes : +- 1.0
Del. quantity	+ Check tolerance
cm3/1000 strokes : 11.5	+ cm3/1000s. : +- 4.0
cm3/1000 strokes : +- 3.0	+ Spreed
Check tolerance	+ cm3/1000 strokes : 5.0
cm3/1000s. : +- 6.0	† Check tolerance
Spreed	+ cm3/1000s. : 9.0
cm3/1000 strokes : 8.0	†
Check tolerance	+
cm3/1000s. : 12.0	+
	+ CONTROL LEVER
	+
(B) SETTING OF INJECTION PUMP	+ control lever
WITH GOVERNOR	+ position degree : 52.0
	+ tolerance degree : +- 4.0
	+
GUIDE SLEEVE TRAVEL	+ control lever
	position degree : 117.0
Rated speed rpm : 1050	tolerance degree : + 4.0
guide sleeve	+
travel mm : 7.80	+ RATED SPEED
Tolerance mm : +- 0.10	}
	rack travel mm : 12.10
Rated speed rpm : 700	Rated speed rpm : 1005
guide sleeve	+ Tolerance 1/min : +- 5
travel mm : 5.45	+
Tolerance mm : + 0.25	rack travel mm : 4.00
	Rated speed rpm : 1125
Rated speed rpm : 300	+ Tolerance 1/min : + 15
guide sleeve	, , , , , , , , , , , , , , , , , , , ,
travel mm : 0.75	rack travel mm : 0.50
Tolerance mm : +- 0.25	+ Tolerance mm : + 0.50
TOTAL THE TIME	+ Rated speed rpm : 1220
Rated speed rpm : 500	Tracea opeca i piii . i izza
guide sleeve	1
travel mm : 3.55	1
Tolerance mm : +- 0.25	+ LOW IDLE
Toter differ than	
Rated speed rpm : 1165	I
guide sleeve	T control lever
travel mm : 9.45	position degree : 83.0
Tolerance mm : + 0.25	tolerance degree : + 4.0
Toterance min : + 0.23	T toterance degree . +- 4.0
	T control lever
CUIDE OF FEVE DOCUTION	
GUIDE SLEEVE POSITION	
Bahad award man . 1120	tolerance degree : + 4.0
Rated speed rpm : 1120	Tooting
Deal Aroust in an a 44 50	† Testing:
Rack travel in mm : 16.50	
Tolerance mm : +- 1.30	+ Rated speed rpm : 300
	+ rack travel mm : 5.30
MILL A A A A A THOMAS AT THE A	+ Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	† Bahad award w
	+ Rated speed rpm : 100
Rated speed rpm : 600	†
Aneroid pressure	+ CRT mm min. :> 8.00
hPa : 1200	†
	+ Rated speed rpm : 325

		+ Check
E CONTROL		
speed rpm	: 600	FUEL DELIVERY CHARACTERISTIC
ravel mm		
nce mm	: +- 0.05	Aneroid pressure
	0.05	+ hPa : 1200
eed rpm	: 950	Rated speed rpm : 950
aver mm		+ Del. quantity
.averum Jee.yww		- cm3/1000 strokes : 232.5
10年(福祉	. + - 0.03	- cm3/1000 strokes : 232.3
peed rpm	: 900	+ Check tolerance
avel mm		+ cm3/1000s. : +- 5.0
ce mm	: 0.05	+ Spreed
	<u>_</u>	+ cm3/1000 strokes : 8.0
	: 750	+ Check tolerance
avel mm	: 13.45	+ cm3/1000s. : 12.0
ce mm		+
		+ Aneroid pressure
beed rpm	: 800	+ hPa : 1200
avel mm	: 13.45	+ Rated speed rpm : 750
ce mm	: + 0.05	Del. quantity
.C 118H	. — 0.03	
LTITUDE		+ Check tolerance
FOR TEST		+ cm3/1000s. : +- 5.0
		+ Spreed
		+ cm3/1000 strokes : 8.0
		+ Check tolerance
		+ cm3/1000s. : 12.0
eed rpm	: 500	
hPa		Aneroid pressure
nra velmm		+ hPa : -
	; + 0.05	
e mm	. — 0.05	
		+ Del. quantity
ENT		+ cm3/1000 strokes : 149.5
		+ cm3/1000 strokes : +- 1.0
hPa	: -	+ Check tolerance
eed rpm	: 500	+ cm3/1000s. : + 4.0
•		Spreed
eed rpm	: 500	+ cm3/1000 strokes : 5.0
100111	. 500	+ Check tolerance
e hPa	; 700	+ cm3/1000s. : 9.0
vel mm	: 1.75	1
velimmi emam	•	<u> </u>
(FBT)	; — U.15	DDFAVALIAV
	500	BREAKAWAY
hPa	: 500	†
vel mm	: 0.60	†
e mm	: +- 0.10	+ Rack travel in mm : 12.10
		Rated speed rpm : 1005
		+ Tolerance 1/min : + 5
-OUT		+
		1
	: > 100	
		OTEDTING SUEL NELTUEDY
eed rpm		T CINDILME BILL MELIMEDA
eed rpm		+ STARTING FUEL DELIVERY
eed rpm		}
ed rpm ed rpm	: < 220	Rated speed rpm : 100
d rpm		+

cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300
Del. quantity
cm3/1000 strokes : 11.5
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 04, 10, 96

Test oil

: ISO 4113

Combination No. : 9 400 087 504

Injection pump

Pump designation : PES5P120A720LS7280

EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1264

Governer no.

: 9 420 080 393

Cust. part No. : 0270740002

Customer-spec. information

Customer

: MBB

: OM 449 LA-EURO I Motor

Power KW

: 235.4

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance *C

: +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar

: **←** 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3 x length mm : 1000 3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm 4.65

: +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 21.00

Firing order : 1-3-5-4-2

: 0-72-144-216-288 Phasing

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 14.15

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 286.5

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

4.0

Spreed

cm3/1000 strokes :

5.0

Check tolerance

cm3/1000s.

9.0

Rated speed rpm : 300

	+ Del. quantity
Rack travel in mm: 5.10	+ cm3/1000 strokes : 286.5
Tolerance mm : +- 0.10	+ cm3/1000 strokes : +- 1.0
Del. quantity	+ Check tolerance
cm3/1000 strokes : 10.5	+ cm3/1000s. : + 4.0
cm3/1000 strokes : +- 3.0	+ Spreed
Check tolerance	+ cm3/1000 strokes : 5.0
$cm3/1000s.$: \leftarrow 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : 9.0
cm3/1000 strokes : 8.0	+
Check tolerance	+
cm3/1000s. : 12.0	
	+ CONTROL LEVER
	+
(B) SETTING OF INJECTION PUMP	+ control lever
WITH GOVERNOR	+ position degree : 53.0
	+ tolerance degree : + 4.0
	+
GUIDE SLEEVE TRAVEL	+ control lever
	position degree : 118.0
Rated speed rpm : 1050	tolerance degree : + 4.0
guide sleeve	+
travel mm : 7.80	+ RATED SPEED
Tolerance mm : +- 0.10	+
	+ rack travel mm : 12.80
Rated speed rpm : 700	+ Rated speed rpm : 1010
guide sleeve	+ Tolerance 1/min : + 5
travel mm : 5.45	1
Tolerance mm : + 0.25	+ rack travel mm : 4.00
	+ Rated speed rpm : 1130
Rated speed rpm : 300	+ Tolerance 1/min : + 15
guide sleeve	1
travel mm : 0.75	+ rack travel mm : 0.50
Tolerance mm : +- 0.25	+ Tolerance mm : + 0.50
	+ Rated speed rpm : 1220
Rated speed rpm : 500	
guide sleeve	1
travel mm : 3.55	
Tolerance mm : + 0.25	+ LOW IDLE
	1
Rated speed rpm : 1165	1
guide sleeve	+ control lever
travel mm : 9.45	position degree : 82.0
Tolerance mm : + 0.25	tolerance degree : + 4.0
	+ · · · · · · · · · · · · · · · · · · ·
	+ control lever
GUIDE SLEEVE POSITION	position degree : 17.0
adipi defet i dolliant	tolerance degree : + 4.0
Rated speed rpm : 1120	is to the degree of the
to the second	- Testing:
Rack travel in mm : 16.50	
Tolerance mm : + 1.30	Rated speed rpm : 300
TO SOLING THE TOTAL SOLING THE SO	rack travel mm : 5.10
	+ Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	
THE COMP PECTACION AT THE COMP DIGI	Rated speed rpm : 100
Rated speed rpm : 600	100 pood (pm - 100
Aneroid pressure	CRT mm main. :> 8.00
hPa : 1300	
11ra : 1500	T Rated speed rpm : 325
	T waten sheen thin . ACA

Speed 1/min			+ Check
Tack traveL mm	TORQUE CONTROL		+ speed 1/min : < 240
Aneroid pressure Aneroid pre	Rated speed rpm	: 600	FUEL DELIVERY CHARACTERISTICS
Aneroid pressure			
Alted speed rpm			Aneroid pressure
Second S	TOCCI GITTOC IIAII	0.05	
Pack travel mm	men beens betes	• 950	1
Tolerance mm : + 0.05			
Casted speed rpm : 900			
Check tolerance cm3/1000S	OCCIONICE NAM	. • • • • • • • • • • • • • • • • • • •	
13.85 13.8	men hades bates	• 900	
Spreed cm3/1000 strokes : 8.0 Check tolerance cm3/1000s 12.0 Check tolerance c			
### A stated speed rpm : 750			, , , , , , , , , , , , , , , , , , ,
Anteroid pressure Ante	oterance mm	: 0.05	
rack travel mm : 14.15 rolerance mm : + 0.05 Aneroid pressure hPa : 1300 Rated speed rpm : 800 rack travel mm : 14.15 rolerance mm : + 0.05 Aneroid pressure hPa : 1300 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 280.0 cm3/1000s. : + 5.0 Spreed cm3/1000s. : + 5.0 Spreed cm3/1000s. : 12.0 Aneroid pressure cm3/1000s. : 12.0 Aneroid pressure hPa : 1300 Aneroid pressure hPa : - cm3/1000s. : 12.0 Aneroid pressure hPa : - cm3/1000s. : 14.0 Aneroid pressure hPa : - cm3/1000s. : 14.0 Check tolerance cm3/1000s strokes : 149.5 cm3/1000s strokes : 149.5 cm3/1000s strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000s strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Aneroid pressure cm3/1000s. : 2.0 Aneroid pressure cm3/1000s. : 4.0 Aneroid pressure cm3/1000s.)nead anead no-	. 750	
Aneroid pressure Aneroid pre	raced speed rpm	; (3U ; 4/, 4E	
Aneroid pressure hPa : 1300 Rated speed rpm : 800 rack travel mm : 14.15 Folerance mm : + 0.05 INEROID/ALTITUDE COMPENSATOR TEST RETTING Rated speed rpm : 500 Reted speed rpm : 500 Rated speed rpm : 1300 Rated speed rpm : 500 Rated speed rpm : 500 Rated speed rpm : 14.15 Rated speed rpm : 1300 Rated speed rpm : 500 Rated speed rpm : 1010 Rated speed rpm : 100			+ UID/10003. : [2.0
New Name	oterance mm	: +- 0.05	†
Rated speed rpm : 750	N= 4 1	000	
Del. quantity cm3/1000 strokes : 280.0 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000 strokes : + 5.0 Spreed cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Check tolerance cm3/1000 strokes : 12.0 Check tolerance cm3/1000 strokes : 12.0 Check tolerance cm3/1000 strokes : 149.5 cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 149.5 cm3/1000 strokes			
Cm3/1000 strokes : 280.0 cm3/1000 strokes : 280.0 cm3/1000 strokes : 2.0 cm3/1000 strokes : 2.0 cm3/1000 strokes : 2.0 cm3/1000s. : - 5.0 spreed cm3/1000s. : - 5.0 spreed cm3/1000s. : - 5.0 spreed cm3/1000s. : - 12.0 cm3/100	rack travel mm	: 14.15	
ANEROID/ALTITUDE COMPENSATOR TEST ANEROID/ALTITUDE COMPENSATOR TEST COMPENSATOR TOWN COMPENSATOR TOWN COMPENSATOR TOWN COMPENSATOR TOWN COMPENSATOR TOWN COMPENSATOR C	Tolerance mm	: +- 0.05	
Check tolerance cm3/1000s. : + 5.0			
COMPENSATOR TEST Cm3/1000s. : + 5.0			
Spreed			
Commonwealth Comm	COMPENSATOR TEST		
Check tolerance cm3/1000S. : 12.0 Rated speed rpm : 500 Pressure hPa : 1300 Pack travel mm : 14.15 Pressure mm : + 0.05 REASUREMENT Pressure hPa : - Rated speed rpm : 500 REASUREMENT Pressure hPa : - Rated speed rpm : 500 Rated speed rpm : 500 Pressure hPa : - Rated speed rpm : 500 Pressure hPa : 940 Rated speed rpm : 2.35 Pressure hPa : 940 Pressure hPa : 940 Rack travel mm : 2.35 Pressure hPa : 600 Pressure hPa : 600 Pressure hPa : 600 Pressure hPa : 600 Rack travel mm : 0.70 Pressure hPa : 600 Pressure hPa : 600 Rack travel mm : 0.70 Pressure hPa : 600 Rack travel mm : 12.80 Rated speed rpm : 1010 TART CUT-OUT Rated speed rpm : 220 STARTING FUEL DELIVERY Press Pressure hPa : 100 Rated speed rpm : 100 Pressure hPa : 600 Rack travel in mm : 12.80 Rated speed rpm : 1010 Rated speed rpm : 1010 Pressure hPa : 600 Rack travel in mm : 12.80 Rated speed rpm : 1010 Rated speed rpm : 1010 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Rated speed rpm : 1010 Pressure hPa : 100 Rack travel in mm : 12.80 Ra			
Cm3/1000s. : 12.0			
Cm3/1000s. : 12.0	SETTING		+ Check tolerance
Aneroid pressure Pressure hPa : 1300 Pressure mm : 14.15 Folerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 Rated speed rpm : 500 Pressure hPa : 940 Pressure hPa : 940 Pressure hPa : 940 Pressure hPa : 2.35 Folerance mm : + 0.15 Pressure hPa : 600 Pressure hPa : 600 Pressure hPa : 0.70 Folerance mm : + 0.10 Rack travel mm : 12.80 Rated speed rpm : 1010 Folerance mm : + 0.10 Rack travel in mm : 12.80 Rated speed rpm : 500 Rack travel in mm : 12.80 Rated speed rpm : 1010 Folerance 1/min : + 5 START CUT-OUT Rated speed rpm : 100			+ cm3/1000s. : 12.0
Aneroid pressure Pressure hPa : 1300 Pressure mm : 14.15 Folerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 Rated speed rpm : 500 Pressure hPa : 940 Pressure hPa : 0.15 Pressure hPa : 600 Pressure hPa : 700 Pressur	Rated speed rom	: 500	+
Pack travel mm			+ Aneroid pressure
Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 149.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000s. : + 5.0 Check tolerance cm3/1000s. : - 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance : 9.0			
Del. quantity cm3/1000 strokes : 149.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000s. : + 4.0 Spreed cm3/1000s. : + 5.0 Check tolerance cm3/1000s. : 9.0 Pressure hPa : 940 check tolerance cm3/1000s. : 9.0 Pressure hPa : 940 check tolerance cm3/1000s. : 9.0 Pressure hPa : 0.15 BREAKAWAY Pressure hPa : 600 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. cm3/100s. cm3/10s.			
### Comparison of the comparis			
Cm3/1000 strokes : + 1.0 Check tolerance Cm3/1000s.	MEASUREMENT		
Check tolerance cm3/1000s. : + 4.0 spreed cm3/1000s. : + 4.0 spreed cm3/1000s. : + 4.0 spreed cm3/1000 strokes : 5.0 check tolerance cm3/1000 strokes : 5.0 check tolerance cm3/1000s. : 9.0 check travel mm : 2.35 colerance mm : + 0.15 colerance mm : + 0.15 colerance mm : 0.70 colerance mm : 0.70 colerance mm : + 0.10 colerance 1/min : + 5 c	INTERNATION INTERNATION		
Comparison Com	Preceure hPs	•	
Spreed Cm3/1000 strokes 5.0 Check tolerance Cm3/1000s. 9.0 Check tolerance Cm3/1000s. 9.0 Cm3/100s. 9.0 Cm3/100s. 9.0 Cm3/100s. 9.0 Cm3/100s. 9.0 Cm3/100s. 9.0 Cm3/100s. 9.0 Cm3/		500	
Rated speed rpm : 500 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Pressure hPa : 940 Pressure mm : 2.35 Folerance mm : + 0.15 Pressure hPa : 600 Pressure hPa : 600 Pressure hPa : 0.70 Folerance mm : 0.70 Folerance mm : + 0.10 Rack travel in mm : 12.80 Rated speed rpm : 1010 Tolerance 1/min : + 5 Rated speed rpm : 220 STARTING FUEL DELIVERY Rated speed rpm : 100	raren sheen thu	. 500	
Check tolerance cm3/1000s. : 9.0 Pressure hPa : 940 Pressure mm : 2.35 Folerance mm : + 0.15 Pressure hPa : 600 Prack travel mm : 0.70 Folerance mm : + 0.10 Rack travel in mm : 12.80 Rated speed rpm : 1010 Rated speed rpm : 1010 Rated speed rpm : > 100 Rated speed rpm : < 220 STARTING FUEL DELIVERY Check Rated speed rpm : 100 Del. quantity	Datad apaad na-	. 500	
cm3/1000s. : 9.0 cm3/100s. :	rared sheed thus	. 500	
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Pressure hPa : 600 Pack travel mm : 0.70 Folerance mm : + 0.10 Folerance mm : 12.80 Rated speed rpm : 1010 Folerance 1/min : + 5 FOLERANCE MAY Rated speed rpm : 100 Folerance 1/min : + 5 FOLERANCE MAY Rated speed rpm : 100 Folerance 1/min : + 5 FOLERANCE MAY Rated speed rpm : 100 Folerance 1/min : + 100 Folerance 1/min : > 80 Folerance mm : 100 Folerance mm			+ UID/10003. : 9.0
Pressure hPa : 600 Pack travel mm : 0.70 Folerance mm : + 0.10 Pack travel in mm : 12.80 Rated speed rpm : 1010 Pated speed rpm : > 100 Pated speed rpm : < 220 Pated speed rpm : 100 Pated speed rp			†
ressure hPa : 600 rack travel mm : 0.70 rolerance mm : + 0.10 TART CUT-OUT ated speed rpm : > 100 ated speed rpm : < 220 Rack travel in mm : 12.80 Rated speed rpm : 1010 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	olerance mm	: ← U.75	PDEAVALIAY
Rack travel mm : 0.70 Folerance mm : + 0.10 Rack travel in mm : 12.80 Rated speed rpm : 1010 Rated speed rpm : > 100 Rated speed rpm : > 220 Rated speed rpm : 100 STARTING FUEL DELIVERY Rated speed rpm : 100 Rated speed rpm : 100 Del. quantity			DREAKAWAT
rolerance mm : + 0.10 Rack travel in mm : 12.80 Rated speed rpm : 1010 Tolerance 1/min : + 5 Rack travel in mm : 12.80 Rated speed rpm : 1010 START CUT-OUT Rated speed rpm : > 220 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity			†
Rated speed rpm : 1010 Tolerance 1/min : + 5 Rated speed rpm : > 100 Rated speed rpm : > 220 Rated speed rpm : > 100 STARTING FUEL DELIVERY Rated speed rpm : 100 Rated speed rpm : 100 Del. quantity			† 201
TOLERANCE 1/min : + 5 TART CUT-OUT Tated speed rpm : > 100 Tated speed rpm : < 220 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	olerance mm	: +- 0.10	
TART CUT-OUT ated speed rpm : > 100 ated speed rpm : < 220 heck peed 1/min : > 80 TARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity			
ated speed rpm : > 100 ated speed rpm : < 220 heck peed 1/min : > 80 Take to speed rpm : 100 peed 1/min : > 80 Del. quantity			Tolerance 1/min: + 5
ated speed rpm : < 220	TART CUT-OUT		+
heck peed 1/min : > 80 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity			+
heck speed rpm : < 220 + STARTING FUEL DELIVERY Rated speed rpm : 100 peed 1/min : > 80 + Del. quantity	lated speed rpm		
theck		: < 220	+ STARTING FUEL DELIVERY
peed 1/min : > 80 + Del. quantity	, ,		+
peed 1/min :> 80 + Del. quantity	heck		+ Rated speed rpm : 100
		: > 80	
+ cm3/1UUU strokes : 265.0	, es contrat		→ cm3/1000 strokes : 265.0

cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 10.5

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.10.96 Test oil : ISO 4113

Combination No. : 0 400 876 261

Injection pump

Pump designation : PES6A90D410RS2293 EP type number : 0 410 896 031

Governor

Governer design. : RSV350...750A0C741L

Governer no. : 0 420 232 414

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ Motor

: OM 352 A

Power KW

: 62.5

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C

40

Tolerance °C

: 40 : + 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 10.95

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 64.0

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

cm3/1000 strokes :

3.0

Check tolerance

cm3/1000s. 7.0

Rated speed rpm : 350

Rack travel in mm: 8.00

Tolerance mm : +- 0.10

Del. quantity		24.0	† ,			754
cm3/1000 strokes cm3/1000 strokes		21.0 2.0		Rated speed rpm rack travel mm		751 9.90
Check tolerance	; +-	2.0	I '	ack travet mm	•	7.70
cm3/1000s.	: +-	4.0	IR	ated speed rpm	•	793
Spreed	•	110		olerance 1/min	: +-	4
cm3/1000 strokes	:	4.5		ack travel mm	:	4.00
Check tolerance			+			
cm3/1000s.	:	7.0	+ r	ack travel mm	:	1.00
				olerance mm		0.70
(D) APTTINA AP TH	1 E O E Y O	A) 011MD	† R	lated speed rpm	:	820
(B) SETTING OF IN WITH GOVERNOR	DECITO	N PUMP	T .	ered appeal nom		752
MILL GOVERNOR				lated speed rpm rack travel mm		9.90
			1 '	ack cravec min	•	7.70
			. → R	ated speed rpm	:	794
GUIDE SLEEVE POST	TION			olerance 1/min		4
			+ r	ack travel mm	:	4.00
Rated speed rpm	:	800	+			4 05
Durali America I .		0.50		ack travel mm	:	1.00
Rack travel in mm		0.50		olerance mm		0.70
Tolerance mm	,	0.20	I	ated speed rpm	•	820
·····			I	ated speed rpm	:	753
FULL LOAD DELIVER	Y AT F	ULL LOAD STOP		ack travel mm	:	9.90
TOCK COMP DECEMENT		JEE 20/10 010 .	1	4011 01 4700 11111	•	7.70
Rated speed rpm	:	700	→ R	ated speed rpm	:	795
Aneroid pressure			+ 1	olerance 1/min	: +-	4
hPa	:		+ r	ack travel mm	:	4.00
Del. quantity		<i>(</i> ((((((((((† _			4 00
cm3/1000 strokes		64.0	•	ack travel mm	:	1.00 0.70
cm3/1000 strokes Check tolerance	: +-	1.0		olerance mm ated speed rpm		820
cm3/1000s.	: +-	3.0	I "	ated speed (bill	•	020
Spreed	• .	3.0	↓ R	ated speed rpm	:	754
cm3/1000 strokes	:	3.0		ack travel mm		9.90
Check tolerance			+			
cm3/1000S.	:	7.0		ated speed rpm		796
			1	olerance 1/min	; +-	4
			† r	ack travel mm	:	4.00
CONTROL LEVER			İ.	ack travel mm	•	1.00
CONTROL LEVER				olerance mm	• +-	0.70
control lever				ated speed rpm		820
position degree	:	81.0	+ "		•	
tolerance degree		4.0	-	ated speed rpm	:	755
•			+ re	ack travel mm	:	9.90
			+ _			-
ASSEMBLY GOVERNOR	SETTI	NG		ated speed rpm		797
Datad assed ass		750		olerance 1/min ack travel mm		4 4.00
Rated speed rpm rack travel mm	:	9.90	I	ack cravet mm	ē	4.00
I ALK LI'AVEL IIIII	•	7.70	I r	ack travel mm	•	1.00
Rated speed rpm	:	792		olerance mm		0.70
Tolerance 1/min	: +-	4	1	ated speed rpm		820
rack travel mm	:	4.00	+	,		_
			+ -			
rack travel mm	:	1.00	+ 1	OW IDLE		
Tolerance mm		0.70	†			
Rated speed rpm	:	820	+			

control lever

position degree 69.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm 350 8.00 rack travel mm Tolerance mm : **←** 0.10

rack travel mm 2.00 Rated speed rpm 400 Tolerance 1/min

SET IDLE AUXILIARY SPRING

400 Rated speed rpm : 2.00 rack travel mm

TORQUE CONTROL

Rated speed rpm 700 10.95 rack travel mm : +- 0.05 Tolerance mm

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity cm3/1000 strokes : 83.0 cm3/1000 strokes : +-7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 21.0 cm3/1000 strokes : +-2.0 Check tolerance

cm3/1000s.

4.0

Spreed

4.5 cm3/1000 strokes :

Check tolerance

7.0 cm3/1000S.

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.10.96 Test oil : ISO 4113

Combination No. : 0 402 066 702

Injection pump

Pump designation : PES6P110A120RS3336

: -1 EP type number : 0 412 016 751

Governor

Governer design. : RSV550...1100P2A586

: -1

Governer no. : 0 421 833 480

Cust. part No. : 3926887

Customer-spec. information Customer : CDC

Motor

Power KW

: 6CTA

: 194.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

: 208.5

bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

```
Outside diameter :
                  6.0
```

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 : +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00

Tolerance

: + 0.50

Check

tolerance *NW : +- 0.75

: 1

Beginning of delivery differende

and maximum rack

Barrel no.

travel : 15.00 Difference ° CS : 1.50

	+ Aneroid pressure
BASIC SETTING	+ hPa : 1500 + Del. quantity
	+ cm3/1000 strokes : 188.0
Rated speed rpm : 1100	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Deals Assess I to make A 1 25	+ cm3/1000s. : + 3.0
Rack travel in mm : 14.25 Tolerance mm : + 0.05	+ Spreed + cm3/1000 strokes : 8.0
TO CEPTATICE IIIII : TO U.U.S	+ cm3/1000 strokes : 8.0 + Check tolerance
Del. quantity	- cm3/1000s. : 12.0
cm3/1000 strokes : 188.0	+
	†
cm3/1000 strokes : +- 1.0	CONTROL LEVED
Check tolerance	+ CONTROL LEVER
cm3/1000s. : +- 3.0	- control lever
	position degree : 96.0
Spreed	† tolerance degree : ← 4.0
cm3/1000 strokes : 8.0	† DATE: 05-10
Charle to Language	+ RATED SPEED
Check tolerance cm3/1000s. : 12.0	rack travel mm : 13.25
	Rated speed rpm : 1185
Rated speed rpm : 550	+ Tolerance 1/min : +- 5
•	+
~	+ rack travel mm : 7.80
Rack travel in mm: 5.10	Rated speed rpm : 1235
Tolerance mm : +- 0.10 Del. quantity	† Tolerance 1/min : +- 5
cm3/1000 strokes : 26.5	rack travel mm : 0.85
cm3/1000 strokes : +- 2.0	+ Tolerance mm : + 0.55
Check tolerance	Rated speed rpm : 1390
cm3/1000s. : +- 4.5	+
Spreed	†
cm3/1000 strokes : 4.0 Check tolerance	LOW IDLE
cm3/1000s. : 6.5	I CON IDEC
	+
	+ control lever
(B) SETTING OF INJECTION PUMP	+ position degree : 67.5
WITH GOVERNOR	tolerance degree : + 4.0
	Setting point w/out bumper spring
	- cetting point thouse samper opining
GUIDE SLEEVE POSITION	Rated speed rpm : 550
~	rack travel mm : 4.60
Rated speed rpm : 800	† _{Tanking}
Rack travel in mm : 0.50	+ Testing:
Tolerance mm : + 0.20	Rated speed rpm : 550
	rack travel mm : 5.10
governor spring	+ Tolerance mm : + 0.10
ore-tension	+
click setting x : 3.00	+ Rated speed rpm : 100
	+ CRT mm min. :> 19.00
FULL LOAD DELIVERY AT FULL LOAD STOP	- CIVI IMM INTITIO
- Amm - Andrews - Little - Amm - All	+
Rated speed rpm : 1100	TORQUE CONTROL

Rated speed rpm	:	1100	
rack travel mm	:	14.2	ŗ
Tolerance mm	:	+- 0.0	5

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rp	m :	1000
Pressure hPa	:	1500

MEASUREMENT

Pressure hPa	:	
Rated speed rpm	:	1000
rack travel mm	:	11.10
Tolerance mm	: -	 0.20

Rated	speed	rpm	:	1000
-------	-------	-----	---	------

Pressure hPa	:	995
rack travel mm	:	13.45
Tolerance mm	: +	- 0.20

Pressure hPa	:	655
rack travel mm	:	12.05
Tolerance mm	: +	- 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa			:	-
Rated	speed	rpm	:	1000

Del. quantity cm3/1000 strokes : 123.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s.

: ← 3.0

BREAKAWAY

Rack travel in mm	:	13.25
Rated speed rpm	:	1185
Tolerance 1/min	:	+- 5

STARTING FUEL DELIVERY

Rated speed	rpm	:	100
rack travel	-	:	21.00

Tolerance mm : +- 0.50 Del. quantity

cm3/1000 strokes : 154.0 cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s.

: +- 25.0

LOW IDLE

Rated speed rpm Del. quantity	:	550	
cm3/1000 strokes cm3/1000 strokes	: : +-	26.5 2.0	
Check tolerance cm3/1000s.	: +-	4.5	
Spreed cm3/1000 strokes	:	4.0	
Check tolerance cm3/1000s.	:	6.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.10.96 Test oil : ISO 4113

Combination No. : 0 402 746 615

Injection bumb

Pump designation : PES6P120A320RS7419

EP type number : 0 412 726 961

Governor

Governer design. : RQV300...1300PA1289K

Governer no. : 0 421 815 520

Cust. part No. : 386 6800

Customer-spec. information Customer : CDC : 6CTA Motor : 249.5 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance *C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1 Inlet press. bar :

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

tolerance *NW : + 0.75

Check

Earrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.60 Tolerance mm : +- 0.05

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

x inside diameter: 3.0

x length mm :

per values ____

BEGINNING OF DELIVERY

17.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm ; +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: + 0.30Tolerance

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 12.50 Tolerance : +- 0.50

		+ Tolerance mm : +- 0.50
Del. quantity		+
cm3/1000 strokes		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: +- 1.0	+ Rated speed rpm : 1200
Check tolerance		+ Aneroid pressure
cm3/1000s.	: 4.0	+ hPa : 1200
		+ Del. quantity
Spreed		+ cm3/1000 strokes : 203.5
cm3/1000 strokes	: 8.0	+ cm3/1000 strokes : +- 1.0 + Check tolerance
Check tolerance		+ cm3/1000s. : +- 4.0
cm3/1000s.	: 12.0	Spreed
	, , , , , , , , , , , , , , , , , , , ,	+ cm3/1000 strokes : 8.0
Rated speed rpm	: 300	+ Check tolerance
		+ cm3/1000s. : 12.0
	4 3=	†
Rack travel in my		†
Tolerance mm Del. quantity	: +- 0.20	CONTROL LEVER
cm3/1000 strokes	: 32.5	I CONTROL LEVER
cm3/1000 strokes		+ control lever
Check tolerance		position degree : 117.0
cm3/1000s.	: 5.0	+ tolerance degree : +- 4.0
Spreed		+
cm3/1000 strokes	: 5.0	+ RATED SPEED
Check tolerance cm3/1000s.	: 8.0	+ rack travel mm : 11.60
Chis/ Tugos.	. 0.0	+ Rated speed rpm : 1320
		+ Tolerance 1/min : +- 5
(B) SETTING OF IN	WECTION PUMP	+
WITH GOVERNOR		+ rack travel mm : 4.00
		Rated speed rpm : 1470
GUIDE SLEEVE TRAV	/EL	Tolerance 1/min : + 15
Datasi awasal awa	: 300	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
Rated speed rpm guide sleeve	: 300	+ Rated speed rpm : 1575
travel mm	: 1.29	Tracea speca rpm . 1313
Tolerance mm	: +- 0.20	+
Rated speed rpm	: 1372	+ LOW IDLE
guide sleeve	. 0.94	†
travel mm Tolerance mm	: 9.86 : + 0.15	t control lever
loterance mm	: - 0.15	position degree : 75.0
Rated speed rpm	: 917	tolerance degree : + 4.0
guide sleeve	•	+
travel mm	: 6.76	† Testing:
Tolerance mm	: +- 0.25	+
	***	+ Rated speed rpm : 300
Rated speed rpm	: 590	rack travel mm : 6.35
guide sleeve	: 4.95	† Tolerance mm : ← 0.20
travel mm Tolerance mm	: 4.95 : +- 0.25	+ Rated speed rpm : 250
ioteiante mi		hatea speca (pill 1 20
Rated speed rpm	: 1710	\perp CRT mm min. :> 7.80
guide sleeve		+
travel mm	: 13.50	+ Rated speed rpm : 450

TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 12.60 Tolerance mm : + 0.05

Rated speed rpm : 800 rack travel mm : 12.20 Tolerance mm : +- 0.10

Rated speed rpm : 1100 rack travel mm : 12.55 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1100 Pressure hPa : 1200

MEASUREMENT

Pressure hPa : Rated speed rpm : 1100
rack travel mm : 9.70
Tolerance mm : + 0.20

Rated speed rpm : 1100

Pressure hPa : 670
rack travel mm : 11.80
Tolerance mm : + 0.20

Pressure hPa : 385 rack travel mm : 10.50 Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200 Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 206.0
cm3/1000 strokes : + 3.0
Check tolerance

cm3/1000s. : +- 6.0
Spreed
cm3/1000 strokes : 8.0
Check tolerance

cm3/1000s. : 12.0

Aneroid pressure

Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 122.0 cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

BREAKAWAY

Rack travel in mm: 11.60
Rated speed rpm: 1320
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.70 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 176.5 cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 300
Del. quantity
cm3/1000 strokes : 32.5
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 5.0
Spreed
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.10.96 Test oil : ISO 4113

Combination No. : 0 402 996 312

Injection pump

Pump designation : PES6P120A720RS8512

: -5

EP type number

: 0 412 926 215

Governor

Governer design. : RE30

Governer no. : 0 421 890 024

Cust. part No. : 313 GC 5225 P1

Customer-spec. information Customer : MACK

Motor

: E7

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance *C

Overflow valve : 3 413 359 008

Inlet press. bar :

3.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 4.60 Tolerance mm : +- 0.05

Check

tolerance mm

: +- 0.10

Rack travel in mm : 12.00

Tolerance mm

: +- 0.20

Firing order : 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

: -300

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1:

Setting point

(P, R and H pump)

Uact V

: 3.100 : 13.00

CRT mm

B01

Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10	+ Amplitude to + Amplitude V : max.1.4
	-
Check value (P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
1 700	TEST POINT V1
Uact V : 1.700 : 6.15	T Rated speed rpm : 900
Tolerance mm : +/- 0.25	+ Uact V : 3.050
Check tolerance mm : +/- 0.30	+ Del. quantity + cm3/1000 strokes : 310.0
toter arice limit . 17 0.30	- cm3/1000 strokes : +- 1.0
	Check tolerance
Setting point (M pump)	+ cm3/1000s. : + 5.0 + Spreed
	+ cm3/1000 strokes : 8.0
Uact V : 3.100 : 12.50	+ Check tolerance + cm3/1000S. : 14.0
Tolerance mm : +/- 0.05	T CIID / 10003
Check	† FUEL DELIVERY CHARACTERISTICS
tolerance mm : +/- 0.10	† Rated speed rpm : 625
Check value	+ Uact V : 3.260
(dand W)	+ Del. quantity + cm3/1000 strokes : 392.0
Uact V : 1.700	+ cm3/1000 strokes : - 392.0
CRT mm : 5.50	- Check tolerance
Tolerance mm : +/- 0.25	+ cm3/1000S. : + 12.0 + Spreed
tolerance mm : +/- 0.30	- spreed - cm3/1000 strokes : 16.0
	Check tolerance
Stop position	cm3/1000s. : 18.0
Uact V : Value with	TEST POINT L1
deenergised adjusting magnet and control rod in	+ Rated speed rpm : 325
stop position.	Rated speed rpm : 325
CRT mm : 0.75	Uact V : 1.310 Uact V : 1.310
Tolerance mm : +/- 0.25	+ Uact V : 1.310 + Tolerance Volt : +- 0.060
tolerance mm : +/- 0.35	Check tolerance
-	+ Volt : +- 0.070
ENGINE-SPEED SENSOR	+ Del. quantity + cm3/1000 strokes : 33.0
(All P and R pumps not	Del. quantity
H and M pumps)	cm3/1000 strokes : 33.0
Test with control rod	+ cm3/1000 strokes : +- 3.0 + cm3/1000 strokes : +- 3.0
in stop position	Spreed
	cm3/1000 strokes : 6.0
Engine speed min-1: 60 - Amplitude V : 1.4 -	+ cm3/1000 strokes : 6.0 + Check tolerance
Amplitude V : 1.4 - Tolerance V : +/- 0.6 -	cm3/1000s. : 14.0
Check - tolerance V : +/- 1.20 -	+ Check tolerance + cm3/1000s. : 14.0
tolerance V : +/- 1.20	T (1167 10003 14.0
Engine speed min—1: 600 - Difference -	STARTING FUEL DELIVERY
cna	

Rated speed rpm	:	100
Uact V	:	4.700
Del. quantity		
cm3/1000 strokes	:	195.0
cm3/1000 strokes	: +-	19.0
Check tolerance		
cm3/1000s.	: +-	22.0
Spreed		
cm3/1000 strokes	:	40.0
Check tolerance		
cm3/1000S.	:	50.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.09.96 Test oil : ISO 4113

Combination No. : 9 400 030 737

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A0C850R

Governer no. : 9 420 034 716

Cust. part No. : 3929409

Customer-spec. information Customer : CDC
Motor : 68T
Power KW : 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : ← 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 10.95

Tolerance mm : +- 0.05

804

+	- Check tolerance
Del. quantity cm3/1000 strokes : 87.5	- cm3/1000s. : 6.0 -
cm3/1000 strokes : +- 1.0	- CONTROL LEVER
Check tolerance cm3/1000s. : + 3.0	- control lever - position degree : 111.0
Spreed cm3/1000 strokes : 3.5	- tolerance degree : +- 4.0 - - RATED SPEED
Check tolerance cm3/1000s. : 6.0	- - rack travel mm : 9.90 - Rated speed rpm : 1155
Rated speed rpm : 500	Tolerance 1/min : + 5
Rack travel in mm: 5.40 Tolerance mm: + 0.10	rack travel mm : 5.50 Rated speed rpm : 1220 Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 13.5 cm3/1000 strokes : +- 2.0 Check tolerance	- - rack travel mm : 0.85 - Tolerance mm : + 0.55 - Rated speed rpm : 1300
cm3/1000s. : +- 4.5 Spreed	rack travel mm : 5.50
cm3/1000 strokes : 3.5 + Check tolerance cm3/1000s. : 5.5 + 5.5	- Rated speed rpm : 1230
CM3/ (UUUS. : 3.3	- LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever 92.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0
Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	Rated speed rpm : 500 rack travel mm : 4.90
governor spring +	Testing:
pre-tension click setting x : 5.00	Rated speed rpm : 500 rack travel mm : 5.40 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1100 Aneroid pressure	CRT mm min. : > 19.00
hPa : 900 + Del. quantity +	TORQUE CONTROL
cm3/1000 strokes : 87.5 cm3/1000 strokes : + 1.0	Rated speed rpm : 1100
Check tolerance cm3/1000s. : +- 3.0 +- Spreed	rack travel mm : 10.95 Tolerance mm : + 0.05
cm3/1000 strokes : 3.5	Rated speed rpm : 800

rack travel mm : 11.50 Tolerance mm : + 0.10

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 900 Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 98.0 cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s.: +- 4.0

BREAKAWAY

Rack travel in mm : 9.90 Rated speed rpm : 1155 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 : +- 0.50 Tolerance mm Del. quaritity

cm3/1000 strokes : 120.5 cm3/1000 strokes : +- 10.0Check tolerance

: +- 15.0 cm3/1000s.

LOW IDLE

500 Rated speed rpm : Del. quantity cm3/1000 strokes : 18.5 cm3/1000 strokes : +-2.0 Check tolerance : +- 4.5 cm3/1000s. Spreed 3.5 cm3/1000 strokes :

Check tolerance

cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 08.10.96 : ISO 4113

Combination No. : 0 402 036 066

Injection pump

Pump designation : PES6P110A720/3LS477

: -2

EP type number : 0 412 016 071

Governor

Governer design. : RQ250/1100PA845 Governer no.

: 0 421 801 380

Cust. part No. : 51.11102-7821

Customer—spec. information

Customer : MAN

: D2866 F/UH Motor

Power KW

: 177.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Tolerance L/h: +- 10.0

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

173.5

: 1 680 750 089

Tolerance bar

Test lines

B07

Outside diameter : 8.0

x inside diameter :

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

3.55 Prestroke mm : + - 0.05Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

: 6-2-4-1-5-Firing order

: 3

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: +- 0.50

Start of delivery mark

Tolerance : ← 0.10

Check

tolerance °NW : +- 0.75

Barrel no.

: 6

BASIC SETTING

Rated speed rpm :

800

Rack travel in mm : 11.95

Tolerance mm : + 0.05

Del. quantity +		
cm3/1000 strokes : 127.5	rack travel mm : 10.90	
	Rated speed rpm : 1153	
cm3/1000 strokes : +- 1.5 +	Tolerance 1/min : +- 8	
Check tolerance +	rack travel mm : 4.00	
cm $3/1000$ s. : $+$	Rated speed rpm : 1245	
+	Tolerance 1/min : +- 15	
Spreed	0.50	
cm3/1000 strokes : 4.0 +	rack travel mm : 0.50	
Charl Astronomy	Tolerance mm : + 0.50	
Check tolerance + cm3/1000s. : 7.5 +	Rated speed rpm : 1350	
cm3/1000s. : 7.5		
Rated speed rpm : 250		
Rated speed rpm : 250	LOW IDLE	
I	FOM IDEE	
Rack travel in mm: 6.10		
Tolerance mm : + 0.10	control lever	
Del. quantity	position degree : 74.0	
cm3/1000 strokes : 17.5	tolerance degree : +- 4.0	
cm3/1000 strokes : +- 2.5 +	toto, and degree . The	
Check tolerance	Testing:	
cm3/1000s. : +- 5.0 +		
Spreed	Rated speed rpm : 250	
cm3/1000 strokes : 4.5	rack travel mm : 6.10	
Check tolerance	Tolerance mm : + 0.10	
cm3/1000s. : 7.5		
+	rack travel mm : 2.00	
+	Rated speed rpm : 340	
(B) SETTING OF INJECTION PUMP +	Tolerance 1/min : +- 20	
WITH GOVERNOR +		
+	Rated speed rpm : 100	
+		
	CRT mm min. $: > 7.60$	
GUIDE SLEEVE POSITION +		
Patrid annual man	TOPOLIE CONTROL	
Rated speed rpm : 600	TORQUE CONTROL	
	Datad aread are . 200	
Rack travel in mm : 20.00 + Tolerance mm : + 0.80 +	Rated speed rpm : 800 rack travel mm : 11.95	
Tolerance mm : + 0.80	rack travel mm : 11.95 Tolerance mm : ← 0.05	
<u> </u>	FOLER GIRE HAST . TO U.U.	
FULL LOAD DELIVERY AT FULL LOAD STOP	D-4-d and ann	
TOTE FOUR RESTACKS AS LOCK FOUR OLDS	Kated Speed rom : 100	
1	Rated speed rpm : 1100 rack travel mm : 11.90	
Rated speed rom : 800	rack travel mm : 11.90	
Rated speed rpm : 800 +		
Aneroid pressure	rack travel mm : 11.90 Tolerance mm : + 0.10	
Aneroid pressure + hPa : - +	rack travel mm : 11.90 Tolerance mm : + 0.10	
Aneroid pressure	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500	
Aneroid pressure hPa : - Del. quantity	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : + 1.5	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : + 1.5 Check tolerance	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 1100	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 12.45	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 12.45	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000 strokes : 4.0	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 12.45 Tolerance mm : + 0.10	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : +- 4.0 Spreed cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 12.45	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 12.45 Tolerance mm : + 0.10 START CUT-OUT	
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 127.5 cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : +- 4.0 Spreed cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : + 0.10 Rated speed rpm : 1100 rack travel mm : 12.45 Tolerance mm : + 0.10	

B08

Rated speed rpm : < 170 Check speed 1/min : > 80 Check speed 1/min : < 190 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1100 Rated speed rpm : Del. quantity cm3/1000 strokes : 138.0 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 123.0 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 BREAKAWAY Rack travel in mm : 10.90 Rated speed rpm : 1153 Tolerance 1/min : +-STARTING FUEL DELIVERY 100 Rated speed rpm : Del. quantity cm3/1000 strokes : 120.0 cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s.: **←** 14.0 LOW IDLE Rated speed rpm 250 Del. quantity cm3/1000 strokes : 17.5 cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 Spreed cm3/1000 strokes : 4.5

Check tolerance cm3/1000s. : 7.5

End of test specification sheet

B09

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08, 10, 96 Edition : U8.70.90 Test oil : ISO 4113

Combination No. : 0 402 046 876

Injection pump

Pump designation : PES6P110A320RS3329Y

EP type number : 0 412 016 756

Governor

Governer design. : RQV325...1250PA1251

Governer no. : 0 421 814 164

Cust. part No. : 1309375/0

Customer-spec. information Customer : DAF : NS133M Motor Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0 temp. °C

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05 Check tolerance mm : + 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 : +- 0.30 Tolerance Check

tolerance °NW : + 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85 Tolerance mm : +- 0.05

		- Tolerance mm : +- 0.50
Del. quantity cm3/1000 strokes	: 146.0	
cm3/1000 strokes	; + 1.0	GUIDE SLEEVE POSITION
Check tolerance		- Rated speed rpm : 1370
cm3/1000s.	: +- 4.0	Rack travel in mm : 10.85 Tolerance mm : +- 1.30
Spreed cm3/1000 strokes	: 4.0	
		FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000S.	: 7.5	- Rated speed rpm : 1000 - Aneroid pressure
Rated speed rpm	: 325	- hPa : 1000 - Del. quantity
Rack travel in m	m · 450	- cm3/1000 strokes : 146.0 - cm3/1000 strokes : +- 1.0
Tolerance mm	1	- Check tolerance
Del. quantity	4	- cm3/1000s. : +- 4.0
cm3/1000 strokes		Spreed
cm3/1000 strokes Check tolerance	: + 2.5	- cm3/1000 strokes : 4.0 - Check tolerance
cm3/1000s.	: ← 5.0	- cm3/1000s. : 7.5
Spreed	+	4
cm3/1000 strokes	: 12.0	<u>-</u>
Check tolerance cm3/1000s.	: 15.0	- CONTROL LEVER
CIID/ 10005.	. 13.0	- CONTINUE BEVEN
(B) SETTING OF IN	NJECTION PUMP	- control lever - position degree : 123.0 - tolerance degree : +- 4.0
		- - RATED SPEED
GUIDE SLEEVE TRAN	VEL +	-
Dated aroad app	. 725	- rack travel mm : 10.85 - Rated speed rpm : 1285
Rated speed rpm guide sleeve	: 325	- Rated speed rpm : 1285 - Tolerance 1/min : +- 5
travel mm	: 1.25	-
Tolerance mm	: ← 0.20	rack travel mm : 4.00
5	1222	- Rated speed rpm : 1360
Rated speed rpm guide sleeve	: 1298	- Tolerance 1/min : +- 15
travel mm	: 10.25	- rack travel mm : 0.50
Tolerance mm	: ← 0.15	- Tolerance mm : + 0.50 - Rated speed rpm : 1500
Rated speed rpm guide sleeve	: 863	- Rated speed rpm : 1900 - -
travel mm	: 5.41	
Tolerance mm	: + 0.25	- LOW IDLE
Rated speed rpm	: 520	•
guide sleeve	7.02	- control lever
travel mm Tolerance mm	: 3.02 + : +- 0.25 +	- position degree : 76.0 - tolerance degree : +- 4.0
TO LET AT ILE THAT	1	. Coterance degree 4.0
Rated speed rpm guide sleeve	: 1510	Testing:
travel mm	: 13.50	Rated speed rpm : 325

rack travel mm 4.50 : + - 0.10Tolerance mm 225 Rated speed rpm : > 6.00 CRT mm min. 375 Rated speed rpm TORQUE CONTROL 1000 Rated speed rpm 11.85 rack travel mm Tolerance mm : +- 0.05 700 Rated speed rpm rack travel mm 11.85 Tolerance mm : + 0.10Rated speed rpm : 1250 rack travel mm : 11.85 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 600 1000 Pressure hPa 11.85 rack travel mm Tolerance mm : **←** 0.05 **MEASUREMENT** Pressure hPa 600 Rated speed rpm 6.50 rack travel mm : +- 0.20 Tolerance mm 600 Rated speed rpm 310 Pressure hPa : 10.55 rack travel mm : +- 0.05 Tolerance mm 130 Pressure hPa 7.85 rack travel mm : + 0.10Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1000 hPa

700 Rated speed rpm Del. quantity cm3/1000 strokes : 147.5 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa Rated speed rpm 1000 Del. quantity cm3/1000 strokes : 83.0 cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s.: +-3.5 BREAKAWAY Rack travel in mm : 10.85 Rated speed rpm : 1285 Tolerance 1/min : +-

LOW IDLE

325 Rated speed rpm Del. quantity cm3/1000 strokes : 26.0 cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s.5.0 : +-Spreed cm3/1000 strokes : 12.0 Check tolerance cm3/1000s. 15.0

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 04.10.96 Test oil : ISO 4113

Combination No. : 0 402 076 811

Injection bumb

Pump designation : PES6P120A1320/5RS338

EP type number : 0 412 026 800

Governor

Governer design. : RSV350...1100P8A664

Governer no. : 0 421 833 584

Cust. part No. : 1385930

Customer-spec. information

Customer : SCANIA

: DS9 93M, DSC9 47M Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm): 4.2

Test oil inlet

40 temp. °C Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mn: +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Spread		Check tolerance cm3/1000s. : +- 4.0
Check tolerance		Spreed
cm3/1000 strokes : 146.0 cm3/1000 strokes : + 1.0 CONTROL LEVER Check tolerance cm3/1000s. : + 4.0 control lever position degree : 59.0 tolerance degree : + 4.0 cm3/1000 strokes : 8.0 control lever position degree : 59.0 tolerance degree : + 4.0 Check tolerance cm3/1000s. : 12.0 control lever position degree : 109.0 tolerance degree : + 4.0 Rated speed rpm : 350 RATED SPEED Rack travel in mm : 5.20 Tolerance mm : + 0.10 Rated speed rpm : 1145 Del. quantity cm3/1000 strokes : 20.0 cm3/1000 strokes : 20.0 cm3/1000 strokes : 4.0 Rated speed rpm : 1240 Check tolerance cm3/1000s. spreed cm3/1000s. spreed cm3/1000s. : + 6.0 spreed cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. : 8.0 rack travel mm : 0.85 Check tolerance cm3/1000s. : 8.0 rack travel mm : 0.85 Control lever position degree : 77.0 rack travel mm : 4.00<	+	Check tolerance
Check tolerance cm3/1000S. : + 4.0 control lever position degree : 59.0 tolerance degree : + 4.0 control lever position degree : + 4.0 control lev		
Check tolerance cm3/1000S. : ← 4.0 control lever position degree : 59.0 tolerance degree : ← 4.0 control lever position degree : 6.0 control lever position degree : 6.0 tolerance degree : ← 4.0 Check tolerance cm3/1000S. : 12.0 RATED SPEED Rack travel in mm : 5.20 Tolerance mm : ← 0.10 Tolerance mm : ← 0.10 Tolerance 1/min : ← 5 Tolerance 1	cm3/1000 strokes : + 1.0	CONTROL LEVER
Spreed cm3/1000 strokes : 8.0		control lever
Description degree 109.0 10.90		tolerance degree : +- 4.0
Rack travel in mm : 5.20		position degree : 109.0
Rack travel in mm : 5.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 20.0 cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : + 6.0 Spreed cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR CBUIDE SLEEVE POSITION Rated speed rpm : 800 Rated speed rpm : 1390 Control lever position degree : 77.0 tolerance degree : + 4.0 Control lever position degree : 27.0 tolerance degree : + 4.0 Tolerance degree : + 4.0 Control lever position degree : 77.0 tolerance degree : + 4.0 Tolerance mm : + 0.20 Setting point w/out bumper spring governor spring pre-tension click setting x : 6.00 Rated speed rpm : 350 rack travel mm : 4.70 Testing: Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : + 0.10 Testing: Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : + 0.10 Tolerance mm : + 0.10 Tolerance mm : + 0.10 Torque CONTROL	Rated speed rpm : 350	RATED SPEED
cm3/1000 strokes : 20.0 rack travel mm : 4.00 cm3/1000 strokes : + 3.0 Rated speed rpm : 1240 Check tolerance rack travel mm : 0.85 cm3/1000 strokes : 4.0 rack travel mm : 0.85 Check tolerance rack travel mm : 0.85 cm3/1000s. : 8.0 rack travel mm : 0.85 (B) SETTING OF INJECTION PUMP LOW IDLE WITH GOVERNOR control lever position degree : 77.0 GUIDE SLEEVE POSITION tolerance degree : + 4.0 Rated speed rpm : 800 control lever position degree : 27.0 Rack travel in mm : 0.50 tolerance degree : + 4.0 Tolerance mm : + 0.20 Setting point w/out bumper spring governor spring pre-tension click setting x : 6.00 Rated speed rpm : 350 click setting x : 6.00 rack travel mm : 4.70 Testing: Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : + 0.10 Tolerance mm : + 0.10	Tolerance mm : + 0.10	Rated speed rpm : 1145
Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 6.00 Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 146.0 rack travel mm : + 0.55 Rated speed rpm : 1390 LOW IDLE LOW IDLE control lever position degree : 77.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 350 rack travel mm : 4.70 Testing: Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : + 0.10	cm3/1000 strokes : 20.0 + cm3/1000 strokes : +- 3.0 + check tolerance +	Rated speed rpm : 1240
Cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR Control lever position degree : 77.0 tolerance degree : + 4.0 Rated speed rpm : 800 control lever position degree : 27.0 tolerance degree : + 4.0 Rack travel in mm : 0.50 tolerance degree : + 4.0 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 6.00 Rated speed rpm : 350 rack travel mm : 4.70 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : + 0.10 Pa : 1500 Tolerance mm : + 0.10 Testing: Torque CONTROL	Spreed + cm3/1000 strokes : 4.0 +	Tolerance mm : $+$ 0.55
Control lever position degree : 77.0 tolerance degree : + 4.0 Rated speed rpm : 800 control lever position degree : + 4.0 Rack travel in mm : 0.50 tolerance degree : + 4.0 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 6.00	The state of the s	Rated speed rpm : 1390
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 6.00 Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 146.0 Rated speed rpm : 75.0 position degree : 77.0 tolerance degree : + 4.0 control lever position degree : 27.0 tolerance degree : 4.0 Setting point w/out bumper spring Rated speed rpm : 350 rack travel mm : 4.70 Testing: Tolerance mm : 5.20 Tolerance mm : 5.20 ToRQUE CONTROL		LOW IDLE
Rack travel in mm: 0.50 Tolerance mm: + 0.20 governor spring pre-tension click setting x: 6.00 Rated speed rpm: 700 Aneroid pressure hPa: 1500 Del. quantity cm3/1000 strokes: 146.0 position degree: 27.0 tolerance degree: + 4.0 Setting point w/out bumper spring Rated speed rpm: 350 rack travel mm: 4.70 Rated speed rpm: 350 rack travel mm: 5.20 Tolerance mm: 5.20 Tolerance mm: + 0.10	GUIDE SLEEVE POSITION	position degree : 77.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20 governor spring pre-tension click setting x: 6.00 Rated speed rpm: 350 rack travel mm: 4.70 Testing: FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 350 rack travel mm: 5.20 Aneroid pressure hPa: 1500 Del. quantity cm3/1000 strokes: 146.0 Tolerance degree: + 4.0 Setting point w/out bumper spring Rated speed rpm: 350 rack travel mm: 5.20 Tolerance mm: + 0.10	Rated speed rpm : 800	
governor spring pre-tension click setting x : 6.00 Rated speed rpm : 350 rack travel mm : 4.70 Testing: FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 146.0 Setting point w/out bumper spring Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL		
rack travel mm : 350 rack travel mm : 4.70 Testing: FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 146.0 Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : + 0.10	+	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700		
Rated speed rpm : 700 + rack travel mm : 5.20 Aneroid pressure hPa : 1500 + Tolerance mm : + 0.10 bel. quantity cm3/1000 strokes : 146.0 + TORQUE CONTROL	FULL LOAD DELIVERY AT FULL LOAD STOP	_
hPa : 1500 +	Rated speed rpm : 700	rack travel mm : 5.20
cm3/1000 strokes : 146.0 + TORQUE CONTROL	hPa : 1500 +	roterance mm : + U.7U
	cm3/1000 strokes : 146.0 +	TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 11.95 Tolerance mm : + 0.05

Rated speed rpm : 1100 rack travel mm : 11.95 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 11.95
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : 150
rack travel mm : 11.05
Tolerance mm : + 0.15

Pressure hPa : 310
rack travel mm : 11.65
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 150.0cm3/1000 strokes : + 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 114.0 cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 10.90
Rated speed rpm : 1145
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 350 Del. quantity cm3/1000 strokes : 20.0 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.: +-6.0 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04,10,96 : ISO 4113

Combination No. : 0 402 076 812

Injection pump

Pump designation : PES6P12OA1320/5RS338

EP type number : 0 412 026 801

Governor

Governer no.

Governer design. : RSV350...1100P1A666

: 0 421 833 585

Cust. part No. : 1385930

Customer-spec. information Customer : SCANIA

Motor

: DS9192A/95M

TEST BENCH REQUIREMENTS

Inlet line 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar

: 251.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance

: +- 0.30

Check

tolerance °NW

: +- 0.50

Start of delivery mark

Tolerance

: **←** 0.10

Check

tolerance °NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 700

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Dock thought in my 1/1/45	†
Rack travel in mm : 14.65 Tolerance mm : +- 0.05	CONTROL LEVER
Del. quantity	+ + control lever
cm3/1000 strokes : 217.0	position degree : 33.0
	tolerance degree : +- 4.0
cm3/1000 strokes : +- 1.0	+
Check tolerance	+ control lever + position degree : 83.0
cm3/1000s. : +- 4.0	+ tolerance degree : +- 4.0
	+
Spreed cm3/1000 strokes : 8.0	RATED SPEED
CIIDA TOCO STITURES . O.O	Track travel mm : 13.60
Check tolerance	Rated speed rpm : 750
cm3/1000s. : 12.0	†
	+ rack travel mm : 4.00 + Rated speed rpm : 788
Rack travel in mm : 6.00	+ Tolerance 1/min : + 4
Tolerance mm : +- 0.20	+
Del. quantity	+ rack travel mm : 0.85
cm3/1000 strokes : 20.0 cm3/1000 strokes : +- 4.0	+ Tolerance mm : +- 0.55 + Rated speed rpm : 850
Check tolerance	T Nated Speed 1pm . 830
cm3/1000s. : + 6.0	+
	†
(B) SETTING OF INJECTION PUMP	TORQUE CONTROL
WITH GOVERNOR	+ ronde continue
	Pated speed npm · 700
	+ Rated speed rpm : 700
	+ rack travel mm : 14.65
GUIDE SLEEVE POSITION	rack travel mm : 14.65 Tolerance mm : + 0.05
	rack travel mm : 14.65 Tolerance mm : + 0.05
GUIDE SLEEVE POSITION Rated speed rpm : 800	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE
Rated speed rpm : 800	rack travel mm : 14.65 Tolerance mm : + 0.05
	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : -
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : -
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 217.0 cm3/1000 strokes : + 1.0	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 12.00 Tolerance mm : + 0.20
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 217.0 cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 500 rack travel mm : 12.00
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 217.0 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 12.00 Tolerance mm : + 0.20 Rated speed rpm : 500
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 217.0 cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 12.00 Tolerance mm : + 0.20
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 217.0 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 12.00 Tolerance mm : + 0.20 Rated speed rpm : 500 Rated speed rpm : 500 Pressure hPa : -
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 217.0 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000 strokes : 8.0	rack travel mm : 14.65 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 14.65 Tolerance mm : + 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 500 rack travel mm : 12.00 Tolerance mm : + 0.20 Rated speed rpm : 500 Pressure hPa : - Rated speed rpm : 500 Rated speed rpm : 500 Pressure hPa : - Rated speed rpm : 500

rack travel mm : 13.95 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Rated speed rpm : 500 cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 4.0

BREAKAWAY

Rack travel in mm : 13.60 Rated speed rpm : 750

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.10.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 640 828

Injection pump

Pump designation : PE12P120A520LS7826 EP type number : 0 412 620 817

Governor

Governer design. : RQV350...1050PA870

: -13

Governer no. : 0 421 813 934

Cust. part No. :

Customer-spec. information Customer : MB-NFZ Motor : 0M 444 Power KW : 620.0 : OM 444 LA

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

: 40 : +- 2.0 temp. °C Tolerance °C

Overflow valve : 1 417 413 077

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160
Tolerance l/h : +- 10.0

Test nozzle holde assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05 Check tolerance mm : +- 0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 12- 1- 5- 9- 8

: - 3- 4- 11- 10 : - 2- 6- 7

Phasing : 0-45-60-105-120

: -165-180-225-240 : -285-300-345

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 1050

B19

Rack travel in mm: 14.05 Tolerance mm: +- 0.05	Check tolerance cm3/1000s. : 10.0
Del. quantity cm3/1000 strokes : 275.0	CONTROL LEVER
cm3/1000 strokes : + 1.0	control lever position degree : 118.0
Check tolerance cm3/1000s. : + 4.0	tolerance degree : +- 4.0 RATED SPEED
Spreed	rack travel mm : 13.00 Rated speed rpm : 1095
Check tolerance cm3/1000s. : 10.0	Tolerance 1/min : +- 5
Rated speed rpm : 350	rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15
Rack travel in mm : 5.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 19.0 cm3/1000 strokes : + 3.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
Check tolerance cm3/1000s. : + 6.0 + Spreed cm3/1000 strokes : 8.0 +	LOW IDLE
Check tolerance cm3/1000s. : 12.0	control lever position degree : 63.0 tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Testing: Rated speed rpm : 350 rack travel mm : 5.60
GUIDE SLEEVE POSITION	Tolerance mm : + 0.10
Rated speed rpm : 1150	Rated speed rpm : 250
Rack travel in mm: 16.50 Tolerance mm: + 1.30	CRT mm min. :> 7.30 Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1050 + Aneroid pressure + HPa : 1800 + Del. quantity	Rated speed rpm : 1050 rack travel mm : 14.05 Tolerance mm : + 0.05
cm3/1000 strokes : 275.0 cm3/1000 strokes : + 1.0 check tolerance cm3/1000s. : + 4.0 spreed	Rated speed rpm : 750 rack travel mm : 14.05 Tolerance mm : +- 0.10
cm3/1000 strokes : 6.0	

ANEROID/ALTITUDE COMPENSATOR TEST

MEASUREMENT

Pressure hPa Rated speed rpm	: :	500
Pressure hPa	:	300
rack travel mm	:	1.45
Tolerance mm	: +-	- 0.05

Pressure hPa	:	900
rack travel mm	:	4.85
Tolerance mm	: +	- 0.15

START CUT-OUT

Rated speed rpm Rated speed rpm	: > : <	200 310	
Check speed 1/min	: >	180	
Check speed 1/min	: <	330	

FUEL DELIVERY CHARACTERISTICS

hiorana	pressure
ACRES CLICS	uressure

Wile old bressure		
hPa	:	1800
Rated speed rpm	:	750
Del. quantity		
cm3/1000 strokes	:	266.0
cm3/1000 strokes	:	+ 3.0
Check tolerance		
cm3/1000s.	:	+- 6.0
Spreed		
cm3/1000 strokes	:	10.0
Check tolerance		
cm3/1000s.	:	15.0

Aneroid pressure

hPa			-
	•		500
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strokes	:		125.0
cm3/1000 strokes	:	+	1.0
Check tolerance			
cm3/1000s.	:	+-	4.0
Spreed			
cm3/1000 strokes	:		10.0
Check tolerance			
cm3/1000s.	:		15.0

BREAKAWAY

Rack travel in mm	:	13.00
Rated speed rpm	:	1095
Tolerance 1/min	:	+- 5

STARTING FUEL DELIVERY

Rated speed rpm	: 100
Del. quantity	
cm3/1000 strokes	: 340.0
cm3/1000 strokes	: +- 10.0
Check tolerance	
cm3/1000s.	: +- 14.0

LOW IDLE

Rated speed rpm Del. quantity	:	350
cm3/1000 strokes cm3/1000 strokes Check tolerance	: : +-	19.0 3.0
cm3/1000s. Spreed	: +-	6.0
cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.10.96 Test oil : ISO 4113

Combination No. : 0 402 696 033

Injection pump

Pump designation : PE6H12O/32OLS4-2 EP type number : 0 412 626 003

Governor

Governer design. : RE36

Governer no. : 0 421 890 359

Cust. part No. : 0250745502

Customer-spec. information Customer : MB-NFZ Motor : OM 441 LA

TEST BENCH REQUIREMENTS

Inlet line : 3.2 ELAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.5 Tolerance bar : + 0.1

Toterance par : +- t

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x angth mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 7.00
Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-60-120-180-240

: -300_

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 6

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING &	SETTING	RACK	TRAVEL	SENSOR
POSITION				

Engine speed min-1:

Setting point (P, R and H pump)

3.100 Uact V 13.00 CRT mm Tolerance mm : +/- 0.05

Check

: +/- 0.10 tolerance mm

Check value (P, R and H pump)

1,700 Uact V CRT mm 6.15 : +/- 0.25 Tolerance mm Check

tolerance mm : +/- 0.30

Setting point (M pump)

Uact V 3.100 12.50 CRT mm Tolerance mm : +/- 0.05

Check

: +/- 0.10 tolerance mm

Check value (M pump)

: 1.700 Uact V 5.50 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm

Stop position

: Value with Uact V

deenergised adjusting magnet

and control rod in

stop position.

CRT mm 0.75 : +/- 0.25 Tolerance mm

Check

tolerance mm : +/- 0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

750 Rated speed rpm 3.000 Uact V Prestroke solenoid Stroke mm 7.00 Del. quantity cm3/1000 strokes : cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. : +-4.0 Spreed cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 9.0

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm Uact V 3.000 Prestroke solenoid 7.00 Stroke mm Del. quantity cm3/1000 strokes : 339.0 cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0

550 Rated speed rpm : Uact V 2.800 Prestroke solenoid 8.70 Stroke mm Del. quantity cm3/1000 strokes : 367.0 cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-6.0

TEST POINT L1

Rated speed rpm : 300 1,500 Uact V

Tolerance Volt : +- 0.060
Check tolerance
Volt : +- 0.060
Prestroke solenoid
Stroke mm : 8.00
Del. quantity
cm3/1000 strokes : 25.0
cm3/1000 strokes : +- 3.0
Spreed
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000s. : 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 1.900
Prestroke solenoid
Stroke mm : 10.00
Del. quantity
cm3/1000 strokes : 106.0
cm3/1000 strokes : +- 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.08.96 : ISO 4113

Combination No. : 0 402 744 805

Injection pump

Pump designation : PES4P120A320RS7312

: -1

EP type number : 0 412 724 803

Governor

Governer design. : RQ400/1200PA1319

Governer no. : 0 421 801 813

Cust. part No. : 51.11103-7553

Customer-spec. information

Customer : MAN

Motor

: D 0824 LOH 05

Power KW

: 114.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

: + 2.0

Overflow valve : 2 417 413 025

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Overflow quantity

min. t/h : 120 Tolerance t/h : + 10.0

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

B25

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm

Tolerance mm

÷ + 0.05

: **←** 0.10

Check

tolerance mm

Firing order

: 1-3-4-2

Phasing

: 0-90-180-270

Tolerance

: +- 0.30

Check

tolerance *NW

: +- 0.50

Start of delivery blocking

Tolerance

: +- 0.10

Check

tolerance *NW

: + 0.75

Barrel no.

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 5.20

Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 72.0

cm3/1000 strokes	: +- 5.0	+ guide sleeve + travel mm : 7.33
Check tolerance	: +- 8.0	† Travel mm : 7.33 † Tolerance mm : +- 0.15
		Rated speed rpm : 1200
Spreed		+ guide sleeve + travel mm : 7.00
cm3/1000 strokes	: 3.0	Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: 6.0	Rated speed rpm : 443
CMS/ (OOOS.	: 6.0	+ guide sleeve + travel mm : 4.95
Rated speed rpm	: 1000	Tolerance mm : + 0.10
		Rated speed rpm : 530
Rack travel in mm		+ guide sleeve
Tolerance mm	: 0.05	+ travel mm : 7.00
Del. quantity		Tolerance mm : + 0.10
cm3/1000 strokes	: 206.0	Rated speed rpm : 1390
		+ guide sleeve
cm3/1000 strokes	: - 1.0	† travel mm : 11.50
-1		† Tolerance mm : + 0.50
Check tolerance		†
cm3/1000s.	: +- 4.0	GUIDE SLEEVE POSITION
Spreed		+
cm3/1000 strokes	: 8.0	Rated speed rpm : 700
Check tolerance		Rack travel in mm: 20.00
cm3/1000s.	: 12.0	Tolerance mm : +- 0.80
Rated speed rpm	: 400	I
		FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm	: 4.80	+ Rated speed rpm : 1000
Tolerance mm	: ← 0.10	+ Aneroid pressure
Del. quantity		+ hPa : 1200
cm3/1000 strokes		+ Del. quantity
cm3/1000 strokes	: ← 3.0	+ cm3/1000 strokes : 206.0
Check tolerance cm3/1000s.	: +- 6.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
Spreed	0.5	- cm3/1000s. : +- 4.0
cm3/1000 strokes	: 8.0	Spreed
Check tolerance		+ cm3/1000 strokes : 8.0
cm3/1000S.	: 12.0	+ Check tolerance
		+ cm3/1000s. : 12.0
(B) SETTING OF INJ	JECTION PUMP	I
WITH GOVERNOR		<u> </u>
		+ CONTROL LEVER
GUIDE SLEEVE TRAVE		+ control lever
COINT SPECAE INVAL		position degree : 99.0
Rated speed rpm	: 400	tolerance degree : + 4.0
guide sleeve		+
travel mm	2.94	+ RATED SPEED
Tolerance mm	: +- 0.20	+ rack travel mm : 12.05
Rated speed rpm	: 1256	+ Rated speed rpm : 1250

Tolerance 1/min	: 8
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1335 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1400
LOW IDLE	
control lever position degree tolerance degree	: 74.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 4.80 : ← 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 433 : +- 20
Rated speed rpm	: 300
CRT mm min.	: > -1.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.05 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 13.05 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.05 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.05 : + 0.05

Pressure hPa Rated speed rpm	: - : 500
rack travel mm	
Tolerance mm	: 8.90 : +- 0.15
roterance mm	: +- 0.13
Rated speed rpm	: 500
	000
Pressure hPa	: 200
rack travel mm	: 9.20
Tolerance mm	: + 0.15
Pressure hPa	: 500
rack travel mm	: 11.85
Tolerance mm	: +- 0.25
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1200
Rated speed rpm	: 1200
Del. quantity	
cm3/1000 strokes	
cm3/1000 strokes	: ← 3.0
Check tolerance	
cm3/1000s.	: ← 6.0
A	
Aneroid pressure	1300
hPa	: 1200
Rated speed rpm	: 700
Del. quantity cm3/1000 strokes	: 218.0
cm3/1000 strokes	: 218.0 : +- 3.0
Check tolerance	. +- 3.0
cm3/1000s.	: +- 6.0
UIID/ 10003.	. 1- 0.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 500
Del. quantity	: 137.0
cm3/1000 strokes cm3/1000 strokes	: + 1.0
Check tolerance	. — 1.0
cm3/1000s.	: +- 4.0
	• •••
BREAKAWAY	
Rack travel in mm	: 12.05
Rated speed rpm	
HALLA SPECA I MIN	
Tolerance 1/min	: +- 8

STARTING FUEL DELIVERY

MEASUREMENT

Rated speed rpm	:	100
rack travel mm	:	8.90
Tolerance mm	: +-	0.30
Del. quantity		
cm3/1000 strokes	:	50.0
cm3/1000 strokes	: +-	8.0
Check tolerance		
cm3/1000s.	: +-	12.0

LOW IDLE

Rated speed rpm	:		400
Del. quantity cm3/1000 strokes	:		40.0
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+	6.0
Spreed			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.10.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 796 033

Injection pump

Pump designation : PES6H120/720LS7 EP type number : 0 412 726 004

Governor

Governer design. : RE36

: 0 421 890 360 Governer no.

Cust. part No. : 0250745702

Customer-spec. information Customer : MB-NFZ : OM 447 LA Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.2 EHAB

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.5 Tolerance bar

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar 1.5

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 600 x length mm :

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 7.00 : +- 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 0.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : **←** 0.75

Start of delivery mark

: + - 0.50Tolerance

Check

tolerance °NW : +- 0.75

: 6 Barrel no.

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

	T rest with control rod
TESTING & SETTING RACK TRAVEL SENSOR POSITION	in stop position
	+ Engine speed min-1: 60
Engine speed min-1: 0	+ Amplitude V : 1.4
- ,	+ Tolerance V : +/- 0.6
Setting point	Check
	+ tolerance V : +/- 1.20
(P, R and H pump)	T toterance v . +7-1.20
	†
Uact V : 3.100 CRT mm : 13.00	+ Engine speed min-1: 600
CRT mm : 13.00	→ Diffarence
Tolerance mm : +/- 0.05	+ Amplitude to
Check	+ Amplitude V : max.1.4
tolerance mm : +/- 0.10	
coter drice half	
Charle calca	Ţ
Check value	
(P, R and H pump)	+ (c) INJECTION PUMP WITH POSITIONER
	+
	+ TEST POINT V1
Uact V : 1.700	1
CRT mm : 6.15	+ Rated speed rpm : 800
Tolerance mm : +/- 0.25	+ Uact V : 2.650
Check	+ Prestroke solenoid
tolerance mm : +/- 0.30	+ Stroke mm : 9.00
	+ Del. quantity
	+ cm3/1000 strokes : 302.0
Setting point	+ cm3/1000 strokes : $+$ 1.0
(M pump)	+ Check tolerance
(1) panips	+ cm3/1000s. : + 4.0
2 400	
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05	+ Spreed
CRI mm : 12.50	+ cm3/1000 strokes : 5.0
, , , , , , , , , , , , , , , , , , ,	+ Check tolerance
Check	+ cm3/1000s. : 9.0
tolerance mm : +/- 0.10	+
	+ FUEL DELIVERY CHARACTERISTICS
Check value	}
(M pump)	+ Rated speed rpm : 1100
(it banks	+ Uact V : 2.750
Uact V : 1.700	+ Prestroke solenoid
	+ Stroke mm : 6.00
Tolerance mm : +/- 0.25	+ Del. quantity
Check	+ cm3/1000 strokes : 302.0
tolerance mm : +/- 0.30	+ cm3/1000 strokes : + 5.0
	+ Check tolerance
Stop position	+ cm3/1000s. : $+$ 8.0
and the state	1
Uact V : Value with	Rated speed rpm : 550
deenergised adjusting magnet	+ Uact V : 2.350
and control rod in	+ Prestroke solenoid
stop position.	+ Stroke mm : 9.00
CRT mm : 0.75	+ Del. quantity
Tolerance mm : +/- 0.25	+ cm3/1000 strokes : 272.0
Check	+ cm3/1000 strokes : +- 8.0
tolerance mm : +/- 0.35	† Check tolerance
TO THE THE THE THE TENTE OF THE	+ cm3/1000s. : + 11.0
	1
FNOTNE COEEN CENCOD	TEST POINT L1
ENGINE-SPEED SENSOR	L IEST LOTINI FI
(All P and R pumps not	T
H and M pumps)	+ Rated speed rpm : 300
	+ Uact V : 1.440

+ Test with control rod

Tolerance Volt Check tolerance	: ← 0.060
Volt	: + 0.060
Prestroke solenoi	
Stroke mm	: 9.00
Del. quantity	
cm3/1000 strokes	: 25.0
cm3/1000 strokes	: ← 3.0
Spreed	
cm3/1000 strokes	: 6.0
Check tolerance	
cm3/1000s.	: 9.0

STARTING FUEL DELIVERY

Uact V	:	100 1.900	
Prestroke solenoi Stroke mm Del. quantity	d :	9.00	
	: : +	104.0 - 10.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 07.10.96 : ISO 4113

Combination No.

: 0 402 946 027

Injection pump

Pump designation : PES6P120A320RS8047 EP type number : 0 412 926 029

Governor

Governer design. : RQV275...1250PA1312K

Governer no.

: 0 421 815 966

Cust. part No. : CCEP 5160 66-244

Customer-spec. information

Customer : RENAULT V.I. Motor : MIDR 06.02.26L71

Power KW

: 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance *C

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5

Overflow quantity

: 145 min. L/h Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

: 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 11.00

Tolerance mm : \leftarrow 0.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

"NW after s.o.d. : -0.60: + - 0.50

Tolerance

Check

tolerance *NW : + - 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

19.50 travel Difference ° CS : 3.00

CO4

	+ Rated speed rpm : 923 + guide sleeve
CRT ZERO POSITION	- + travel mm : 6.76 + Tolerance mm : + 0.25
Rack travel in mm : 12.10 Tolerance mm : + 0.05	Rated speed rpm : 550 guide sleeve travel mm : 3.92 Tolerance mm : + 0.25
BASIC SETTING	- +
Rated speed rpm : 1250	guide sleeve travel mm : 13.50
Del. quantity cm3/1000 strokes : 185.0	
cm3/1000 strokes : + 1.0	GUIDE SLEEVE POSITION
	Rated speed rpm : 1430
Check tolerance cm3/1000s. : +- 4.0	Rack travel in mm : 11.10 Tolerance mm : +- 2.70
Spreed cm3/1000 strokes : 5.0	+ FULL LOAD DELIVERY AT FULL LOAD STO
Check tolerance cm3/1000S. 9.0	Rated speed rpm : 1250
Rated speed rpm : 325	Aneroid pressure hPa : 1600
Rack travel in mm : -7.50	+ Del. quantity + cm3/1000 strokes : 185.0 + cm3/1000 strokes : + 1.0
Tolerance mm : +- 0.10 Del. quantity	+ Check tolerance - cm3/1000s. : +- 4.0
cm3/1000 strokes : 33.0 cm3/1000 strokes : +- 2.0	+ Spreed + cm3/1000 strokes : 5.0
Check tolerance cm3/1000s. : +- 6.0	Check tolerance : 9.0
Spreed cm3/1000 strokes : 8.0	‡
Check tolerance cm3/1000S. : 12.0	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 296.0 tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	- RATED SPEED
Rated speed rpm : 325	rack travel mm : -1.00 Rated speed rpm : 1325
guide sleeve travel mm : 1.52	Tolerance 1/min : +- 15
Tolerance mm : + 0.20	rack travel mm : -8.10 Rated speed rpm : 1465
Rated speed rpm : 1340 guide sleeve	Tolerance 1/min : + 5
travel mm : 9.96 Tolerance mm : +- 0.15	rack travel mm : -11.60 Tolerance mm : +- 0.55 Rated speed rpm : 1600

LOW IDLE

control lever

position degree : 241.0 tolerance degree : + 4.0

Testing:

Rated speed rpm : 325 rack travel mm : -7.50 Tolerance mm : + 0.10

Rated speed rpm : 200

CRT mm min. : < -6.10

Rated speed rpm : 325 rack travel mm : > 6.10

TORQUE CONTROL

Rated speed rpm : 1250

Rated speed rpm : 650 rack travel mm : -2.10 Tolerance mm : + 0.10

Rated speed rpm : 350 rack travel mm : -3.25 Tolerance mm : + 0.25

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1250
Pressure hPa : 1600
Tolerance mm : +- 0.10

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : -4.60
Tolerance mm : +- 0.20

Rated speed rpm : 1250

Pressure hPa : 250 rack travel mm : -3.70 Tolerance mm : + 0.20

Pressure hPa	:	700
rack travel mm	:	-0.60
Tolerance mm	: +-	0.05

START CUT-OUT

Rated speed rpm : > 175
Rated speed rpm : < 240

Check

speed 1/min : > 155 Check

speed 1/min : < 260

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1600 Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 174.5 cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : + 6.0

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity

 $cm3/1000 \text{ strokes} : 124.0 \\ cm3/1000 \text{ strokes} : + 1.0$

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : -1.00
Rated speed rpm : 1325
Tolerance 1/min : + 15

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 113.0 cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm Del. quantity	:	325
cm3/1000 strokes cm3/1000 strokes	:	33.0 ← 2.0
Check tolerance cm3/1000s.	;	← 6.0
Spreed cm3/1000 strokes	:	8.0
Check tolerance cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.06.96 Test oil : ISO 4113

Combination No. : 0 403 476 132

Injection pump

Pump designation : PES6MW100/320RS1132

: -1 EP type number : 0 413 406 230

Governor

Governer design. : RSV325...1200MW0A359

: -1

Governer no. : 0 420 085 241

Cust. part No. : 866708/P04/960802

Customer-spec. information Customer : PENTA : TD 630ME Motor Power KW : 119.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0

x Length imm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 2.95 Tolerance mm : + 0.05 Check tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.65 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 116.0

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.	: ← 3.0
Spreed cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 6.0
Rated speed rpm	: 325
Rack travel in mm Tolerance mm	: 6.00 : +- 0.10
Del. quantity	. ' 0.10
cm3/1000 strokes	: 14.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: +- 4.5
cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 5.5
(B) SETTING OF INWITH GOVERNOR	JECTION PUMP
WITH GOVERNOR GUIDE SLEEVE POSI	TION
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm	TION : 800
WITH GOVERNOR GUIDE SLEEVE POSI	TION : 800
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm	TION : 800 : 0.65
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension	: 800 : 0.65 : + 0.35
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm Tolerance mm governor spring	: 800 : 0.65 : + 0.35
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x	: 800 : 0.65 : + 0.35
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x	TION : 800 : 0.65 : + 0.35 : 3.20
WITH GOVERNOR GUIDE SLEEVE POST Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER' Rated speed rpm Aneroid pressure	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP : 700
WITH GOVERNOR GUIDE SLEEVE POST Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER' Rated speed rpm Aneroid pressure hPa	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP : 700 : 1000
WITH GOVERNOR GUIDE SLEEVE POSIT Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER' Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP : 700
WITH GOVERNOR GUIDE SLEEVE POSIT Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP : 700 : 1000 : 116.0 : + 1.0
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER' Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP : 700 : 1000 : 116.0
WITH GOVERNOR GUIDE SLEEVE POSIT Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER' Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP : 700 : 1000 : 116.0 : + 1.0 : + 3.0
WITH GOVERNOR GUIDE SLEEVE POSI Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER' Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	TION : 800 : 0.65 : + 0.35 : 3.20 Y AT FULL LOAD STOP : 700 : 1000 : 116.0 : + 1.0

control lever position degree tolerance degree	: 96.0 : +- 4.0
RATED SPEED	
rack travel mm Rated speed rpm Tolerance 1/min	: 1230
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1285 : + 10
rack travel mm Tolerance mm Rated speed rpm	: 1.00 : +- 0.70 : 1350
rack travel mm Rated speed rpm	: 4.00 : 1295
LOW IDLE	
control lever position degree tolerance degree	: 69.0 : + 4.0
Setting point w/c	out bumper spring
Rated speed rpm rack travel mm	: 325 : 5.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 6.00 : +- 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 490 : +- 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.65 : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

700 Rated speed rpm : 1000 Pressure hPa rack travel mm : 12.65 : +- 0.05 Tolerance mm

MEASUREMENT

Pressure hPa 700 Rated speed rpm 10.55 rack travel mm : + 0.05Tolerance mm

700 Rated speed rpm

610 Pressure hPa rack travel mm 12.45 : + - 0.15Tolerance mm

270 Pressure hPa 10.75 rack travel mm Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 700 Rated speed rpm Del. quantity cm3/1000 strokes : 77.0

cm3/1000 strokes : +-1.0 Check tolerance

cm3/1000s. : +-3.0

BREAKAWAY

Rack travel in mm : 11.60 Rated speed rpm : Tolerance 1/min : +-

STARTING FUEL DELIVERY

100 Rated speed rpm : 20.00 rack travel mm : : +- 1.00 Tolerance mm

Del. quantity cm3/1000 strokes : 135.0 cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : 13.0

LOW IDLE

325 Rated speed rpm : Del. quantity cm3/1000 strokes : 14.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.09.96 Test oil : ISO 4113

Combination No. : 9 400 083 423

Injection pump

Pump designation : PES3A80D320/3RS1264

EP type number : 9 400 083 053

Governor

Governer design. : RSV350...900A7C627R

Governer no. : 9 420 083 264

Cust. part No. :

Customer-spec. information

Customer : MWM

: D225-3 Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

bar 173.5

Tolerance bar : \leftarrow 1.5

Test lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 2.25

: +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1- 2- 3

Phasing : 0-120-240

Beginning of delivery differende

and maximum rack

: 10.50 travel Tolerance mm

Tolerance mm : + 1.50 Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 10.25

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 52.0

cm3/1000 strokes : +- 0.5

Check tolerance

; +- 2.0 cm3/1000s.

Spreed

cm3/1000 strokes : 2.5

Check tolerance +	
cm3/1000s. : 4.0	rack travel mm : 0.85
+	Tolerance mm : +- 0.55
Rated speed rpm : 350	Rated speed rpm : 1100
+	
†	ASSEMBLY GOVERNOR SETTING
Rack travel in mm: 6.00 +	
Tolerance mm : + 0.10 +	Rated speed rpm : 940
Del. quantity + cm3/1000 strokes : 9.5 +	rack travel mm : 9.20
cm3/1000 strokes : +- 1.5	Rated speed rpm : 969
Check tolerance	Tolerance 1/min : +- 4
cm3/1000s. : + 3.5	rack travel mm : 4.00
Spreed	. 3011 01 070 0 11111
cm3/1000 strokes : 4.0 +	Rated speed rpm : 941
Check tolerance	rack travel mm : 9.20
cm3/1000s. : 6.0 +	
+	Rated speed rpm : 970
<u> </u>	Tolerance 1/min : + 4
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	Rated speed rpm : 942
I	rack travel mm : 9.20
	TUCK CI GVCC IIRII
GUIDE SLEEVE POSITION +	Rated speed rpm : 971
+	Tolerance 1/min : + 4
Rated speed rpm : 800	rack travel mm : 4.00
t.	
Rack travel in mm: 0.65	Rated speed rpm : 943
Tolerance mm : + 0.35	rack travel mm : 9.20
devenue anning	Rated speed rpm : 972
governor spring + pre-tension +	Tolerance 1/min : +- 4
click setting x : 6.00	rack travel mm : 4.00
Total Sections A 1 State	. 40% 07 47 02 11811
	Rated speed rpm : 944
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 9.20
†	- · · · · · · · · · · · · · · · · · · ·
Reted speed rpm : 900	Rated speed rpm : 973
Aneroid pressure	Tolerance 1/min : +- 4 rack travel mm : 4.00
hPa : - + Del. quantity +	rack travet min : 4.00
cm3/1000 strokes : 52.0	Rated speed rpm : 945
cm3/1000 strokes : + 0.5	rack travel mm : 9.20
Check tolerance +	
cm3/1000s. : + 2.0	Rated speed rpm : 974
Spreed +	Tolerance 1/min : + 4
cm3/1000 strokes : 2.5	rack travel mm : 4.00
Check tolerance	
cm3/1000s. : 4.0	LOW IDLE
I	COM INCE
CONTROL LEVER	control lever
+	position degree : 79.0
control lever +	tolerance degree : +- 4.0
position degree : 111.0	
tolerance degree : + 4.0	Setting point w/out bumper spring
DATED SPEED	Rated speed rpm : 350
RATED SPEED +	rated speed thin : 330

rack travel mm : 5.50

Testing:

Rated speed rpm : 350 rack travel mm : 6.00 Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 450
Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 10.25 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 10.30 Tolerance mm : $\leftarrow 0.10$

Rated speed rpm : 400 rack travel mm : 11.20 Tolerance mm : + 0.30

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00

LOW IDLE

Rated speed rpm : 350
Del. quantity
cm3/1000 strokes : 9.5
cm3/1000 strokes : + 1.5
Check tolerance
cm3/1000s. : + 3.5
Spreed
cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.09.96 Test oil : ISO 4113

Combination No. : 9 400 083 427

Injection pump

Pump designation : PES4A80D320/3RS1265

EP type number : 9 400 083 055

Governor

Governer design. : RSV350...900A7C627R

Governer no. : 9 420 083 264

Cust. part No. :

Customer—spec. information Customer : MWM Motor : D225-4

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter: 2.0

C14

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.25 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50
Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 10.25 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 52.0

cm3/1000 strokes : + 0.5

Check tolerance

cm3/1000s. : + 2.0

Spreed

cm3/1000 strokes : 2.5

2.5

Check tolerance cm3/1000s. : 4.0	ASSEMBLY GOVERNOR SETTING
Rated speed rpm : 350	Rated speed rpm : 940 rack travel mm : 9.20
Rack travel in mm: 6.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 9.5	Rated speed rpm : 969 Tolerance 1/min : +- 4 rack travel mm : 4.00
cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1100
Spreed cm3/1000 strokes : 4.0 Check tolerance	Rated speed rpm : 941 rack travel mm : 9.20
cm3/1000s. : 6.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 970 Tolerance 1/min : + 4 rack travel mm : 4.00
WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1100
GUIDE SLEEVE POSITION Rated speed rpm : 800	Rated speed rpm : 942 rack travel mm : 9.20
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring	Rated speed rpm : 971 Tolerance 1/min : + 4 rack travel mm : 4.00
pre-tension click setting x : 6.00	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 943 rack travel mm : 9.20
Rated speed rpm : 900 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 52.0	Rated speed rpm : 972 Tolerance 1/min : + 4 rack travel mm : 4.00
cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.0 Spreed	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1100
cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. : 4.0	Rated speed rpm : 944 rack travel mm : 9.20
	Rated speed rpm : 973 Tolerance 1/min : + 4 rack travel mm : 4.00
control lever position degree : 111.0	rack travel mm : 0.85 Tolerance mm : ÷ 0.55 Rated speed rpm : 1100
tolerance degree : +- 4.0	Rated speed rpm : 945 rack travel mm : 9.20

Rated speed rpm : 974
Tolerance 1/min : + 4
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1100

LOW IDLE

control lever

position degree : 79.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 5.50

Testing:

Rated speed rpm : 350 rack travel mm : 6.00 Tolerance mm : + 0.10

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 10.25 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 10.30 Tolerance mm : +- 0.10

Rated speed rpm : 400 rack travel mm : 11.20 Tolerance mm : + 0.30

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 9.5

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 3.5

Spreed

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 18.09.96 : ISO 4113

Combination No. : 9 400 083 429

Injection pump

Pump designation : PES6A80D320/3RS1261

EP type number : 9 400 083 057

Governor

Governer design. : RSV350...900A7C627R

Governer no. : 9 420 083 264

Cust. part No. :

Customer-spec. information Customer : MWM

: D225-6 Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 003

Outside diameter :

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 2.25 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50 Tolerance mm Tolerance mm : + 1.50 Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 10.25 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 52.0

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000s. : **←** 2.0

Spreed

cm3/1000 strokes	: 2.5	+			
		+ R/	ATED SPEED		
Check tolerance		+			
cm3/1000s.	: 4.0	+ ra	ack travel mm	:	0.85
		∔ το	olerance mm	: +-	0.55
Rated speed rpm	: 350		ated speed rpm		
Nated speed i pili	. 350	1 "	rea opeca (piii	• '	100
		I ,	SSEMBLY GOVERNOR	SE' TI	NG
Daal Amayal in mm	. 4.00	T ^\	SOUNDE! GOVERNOR	SEIII	טעו
Rack travel in mm		T s.			040
	: +- 0.10		ated speed rpm		940
Del. quantity		+ ra	ack travel mm	:	9.20
cm3/1000 strokes		† _			
cm3/1000 strokes	: 1.5		ated speed rpm		969
Check tolerance			olerance 1/min		4
cm3/1000s.	: ← 3.5	+ ra	ack travel mm	:	4.00
Spreed		+			
cm3/1000 strokes	: 4.0	i 🕂 ra	ack travel mm	:	0.85
Check tolerance		-	olerance mm	: +-	0.55
	: 6.0	Ra	ated speed rrin	•	1100
(110) 10000.	. 3.5	1 "	icoa opeca , .ii	•	1100
		I ps	ated speed rpm	:	0/.1
(D) SETTING OF THU	CCTTON DUMP		ack travel mm		9.20
(B) SETTING OF INJI	ECITON POMP	T re	ick travet min	•	9.20
WITH GOVERNOR		† _			
		† Ra	ated speed rpm	:	970
			olerance 1/min	: +-	4
		+ ra	ack travel mm	:	4.00
GUIDE SLEEVE POSIT	ION	+			
		+ ra	ack travel mm	:	0.85
Rated speed rpm	: 800	→ To	olerance mm	: +-	0.55
	, , , , , , , , , , , , , , , , , , , ,		ated speed rpm		1100
Rack travel in mm	: 0.65	1	, our apoon thin	•	
	· +- 0.35	ءِم لِ	ated speed rpm	:	942
roterance man	. 1 . 0.35	I	ick travel mm		9.20
		T '°	ick travet iikii	•	7.20
governor spring		T 3-	بين لممميم أمصاف		074
pre-tension	. 55		ited speed rpm	:	971
click setting x	: 6.00		lerance 1/min	: +-	4
		+ ra	ick travel mm	:	4.00
		+			
FULL LOAD DELIVERY	AT FULL LOAD STOP		ick travel inm	:	0.85
		+ To	olerance mm	: +-	0.55
Rated speed rpm :	: 900	+			
Aneroid pressure		→ Ra	ited speed rpm	:	943
hPa	<u>-</u>	→ ra	ick travel mm	•	9.20
Del. quantity		1		•	
7.4600	: 52.0	⊥ Ra	ited speed rpm	•	972
<u>_</u> .	· + 0.5		terance 1/min	: +-	4
	. +- 0.5		ick travel mm	• •	
Check tolerance	. 20	† ra	ick travet mm	:	4.00
••.	: +- 2.0	†	. t		0.05
Spreed			ick travel mm	:	0.85
cm3/1000 strokes :	: 2.5	+ 10	lerance mm	: +-	0.55
Check tolerance		+			
cm3/1000s. :	: 4.0		ited speed rpm	:	944
		→ ra	ick travel mm	:	9.20
		+			
		→ Ra	ted speed rpm	:	973
CONTROL LEVER			lerance 1/min	. +-	4
		, , , ,		•	
		l ra		•	ፈ በብ
		† ra	ck travel mm	:	4.00
control lever	111 0	+	ck travel mm	:	
control lever position degree :	111.0	+ ra	ck travel mm	:	0.85
control lever		+ ra	ck travel mm	: +	

Rated speed rpm : 945 rack travel mm : 9.20

Rated speed rpm : 974
Tolerance 1/min : + 4
rack travel mm : 4.00

rack travel mm : 0.85 Tolerance mm : +- 0.55

LOW IDLE

control lever

position degree : 79.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 5.50

Testing:

Rated speed rpm : 350 rack travel mm : 6.00 Tolerance mm : $\leftarrow 0.10$

rack travel mm : 2.00
Rated speed rpm : 450
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 10.25 Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm : 10.30 Tolerance mm : + 0.10

Rated speed rpm : 400 rack travel mm : 11.20 Tolerance mm : + 0.30

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 9.5

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 3.5

Spreed

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 17.09.96 : ISO 4113

Combination No. : 9 400 083 450AJ

Injection pump

Pump designation : PES6A100D320/3RS2691

EP type number

: 9 410 230 025

Governor

Governer design. : RSV375...1150A2C2210

Governer no.

: 9 420 083 202

Cust. part No. : 3353250-VERSA009

Customer-spec. information Customer : CUMMINS : 6 C 8.3 L Motor

Power KW

: 120.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar : +- 1.5

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.85 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Beginning of delivery differende

and maximum rack

10.50 travel : +- 1.50 Tolerance mm Difference ° CS : 3.50

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 10.75 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 93.0

cm3/1000 strokes : +-1.0

Check tolerance : +- 3.0

cm3/1000s.

C20

	1
Spreed cm3/1000 strokes : 3.5	control lever position degree : 98.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 8.0	RATED SPEED
Rated speed rpm : 375	rack travel mm : 9.70 Rated speed rpm : 1295 Tolerance 1/min : + 5
Rack travel in mm: 5.20 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 11.0 cm3/1000 strokes: + 2.0 Check tolerance cm3/1000S.: + 4.5	rack travel mm : 4.00 Rated speed rpm : 1350 Tolerance 1/min : + 15 rack travel mm : 0.85 Tolerance mm : + 0.55
Spreed cm3/1000 strokes : 5.5 Check tolerance	+ Rated speed rpm : 1500
cm3/1000S. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 69.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 375 rack travel mm : 4.70
Rack travel in mm : 0.65 Tolerance mm : + 0.35	Testing:
governor spring pre-tension click setting x : 3.50	Rated speed rpm : 375 rack travel mm : 5.20 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 565 Tolerance 1/min : +- 30
Rated speed rpm : 1250 Aneroid pressure hPa : -	Rated speed rpm : 100
Del. quantity cm3/1000 strokes : 93.0 cm3/1000 strokes : +- 1.0	CRT mm min. : > 19.00
Check tolerance cm3/1000s. : +- 3.0	TORQUE CONTROL
Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 8.0	Rated speed rpm : 1250 rack travel mm : 10.75 Tolerance mm : + 0.05
	Rated speed rpm : 500 rack travel mm : 11.90 Tolerance mm : +- 0.10
CONTROL LEVER	+ Rated speed rpm : 600 + rack travel mm : 11.90

: +- 0.10
: 900 : 11.40 : +- 0.10
RACTERISTICS
: 600
: 102.0
: + 2.0
: +- 4.0
: 5.0
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
: 8.0
: -
: 900
: 101.0
: +- 2.0
: 4.0
: 5.0
: 5.0
: 8.0
: 9.70 : 1295 : +- 5
IVERY : 100 : 20.00

LOW IDLE

Rated speed rpm Del. quantity	: 375
cm3/1000 strokes	: 11.0
cm3/1000 strokes	: +- 2.0
Check tolerance	
cm3/1000s.	: +- 4.5
Spreed	
cm3/1000 strokes	: 5.5
Check tolerance	0.0
cm3/1000s.	: 9.0

End of test specification sheet

Check tolerance cm3/1000s. : + 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.09.96 : ISO 4113

Combination No. : 9 400 083 451

Injection pump

Pump designation : PES6A100D320/3RS2691

EP type number : 9 410 230 028

Governor

Governer design. : RQV350...1100AB1218R

Governer no. : 9 420 080 214

Cust. part No. :

Customer-spec. information

Customer : CUMMINS

Motor

: 6 CT/8.3 1

Power KW

: 157.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: + 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.85 : + - 0.05Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Beginning of delivery differende

and maximum rack

10.50 travel Tolerance mm : + Difference ° CS : : +- 1.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.65 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 118.0

cm3/1000 strokes : + 1.0

Check tolerance

: + 3.0 cm3/1000s.

		_ + Rated speed rpm	
eed 3/1000 strokes	: 3.5	+ Aneroid pressure + hPa	: 800
		_ + Del. quantity	444
heck tolerance		cm3/1000 strokes	
n3/10 0 0s.	: 8.0	cm3/1000 strokes Check tolerance	
ated speed rpm	: 350	- cm3/1000s.	: +- 3.0
rea opeca i piii	. 030	Spreed	
		+ cm3/1000 strokes	: 3.5
ack travel in mm		+ Check tolerance	
olerance mm	: +- 0.10	+ cm3/1000s.	: 8.0
el. quantity m3/1000 strokes	: 15.0	Ī	
m3/1000 strokes		I	
heck tolerance		CONTROL LEVER	
m3/1000s.	; 	-	
preed			
m3/1000 strokes		+ position degree	
heck tolerance		tolerance degree	: +- 4.0
m3/1000s.	: 9.0	†	
		+ control lever	440.0
D) OFTTANO OF TH	IFOTTON DIMO	+ position degree	
B) SETTING OF IN ITH GOVERNOR	ACCITON POMP	tolerance degree	; +- 4.0
THE GOVENION		RATED SPEED	
UIDE SLEEVE TRAVI	FL	† + rack travel mm	: 11.60
JIPE GEEFE HAVE		+ Rated speed rpm	
ated speed rpm	: 1100	+ Tolerance 1/min	
uide sleeve		+	
ravel mm	: 8.45	🕂 rack travel mm	: 4.00
olerance mm	: ← 0.05	+ Rated speed rpm	
	000	† Tolerance 1/min	: +- 15
ated speed rpm	: 800	† nook trough an	. 0.50
uide sleeve ravel mm	: 5.75	+ rack travel mm + Tolerance mm	: 0.50 : + 0.50
ravet mm olerance mm	: +- 0.15	+ Rated speed rpm	
Jesi de Ive Imili	• • • • • • • • • • • • • • • • • • • •	T Water speed this	. 1570
ated speed rpm	: 350	}	
uide sleeve		+	
ravel mm	: 2.40	+ LOW IDLE	
olerance mm	: +- 0.20	†	
ntad naad	: 500	t control lever	
ated speed rpm wide sleeve	.)00	+ position degree	: 71.0
ravel mm	: 4.05	tolerance degree	
olerance mm	: + 0.15	+	7 . 410
		control lever	
		position degree	: 15.0
JIDE SLEEVE POSIT	FION	tolerance degree	
ated speed rpm	: 1090	† Testing:	
		+	
,	4. ——	+ Rated speed rpm	: 350
ack travel in mm			
ack travel in mm		+ rack travel mm	: 5.90
•			
ck travel in mm lerance mm		+ rack travel mm	: 5.90 : + 0.10

CRT mm min.	: > 9.00	t Check speed 1/min : < 290
Rated speed rpm	: 425	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		Aneroid pressure
Rated speed rpm	: 1100	Rated speed rpm : 700
rack travel mm		+ Del. quantity
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : 133.0
10001 41100 11111	. 5.65	+ cm3/1000 strokes : + 2.0
Rated speed rpm	: 700	+ Check tolerance
rack travel mm		+ cm3/1000S. : + 4.0
Tolerance mm		+ Spreed
		+ cm3/1000 strokes : 5.0
Rated speed rpm	: 800	- Check tolerance
rack travel mm	: 13.40	+ cm3/1000s. : 8.0
Tolerance mm		+
		Aneroid pressure
Rated speed rpm	: 950	+ hPa : 800
rack travel mm	: 12.95	Rated speed rpm : 800
Tolerance mm	: ← 0.15	h hal minakaki.
		+ cm3/1000 strokes : 129.5
ANEROID/ALTITUDE		Check tolerance
COMPENSATOR TEST		+ cm3/1000s. : +- 4.0
		Spreed
		+ cm3/1000 strokes : 5.0
SETTING		- Check tolerance
		+ cm3/1000s. : 8.0
Rated speed rpm	: 500	
Pressure hPa	: 800	Aneroid pressure
rack travel mm		+ hPa : -
Tolerance mm		Rated speed rpm : 500
		+ Del. quantity
MEASUREMENT		- cm3/1000 strokes : 94.5
		+ cm3/1000 strokes : + 1.0
Pressure hPa	: -	- Check tolerance
Rated speed rpm	: 500	+ cm3/1000s. : + 3.0
alabam (lau)	, , , , , , , , , , , , , , , , , , , ,	Spreed
Rated speed rpm	: 500	+ cm3/1000 strokes : 3.5
epsem ipm		- Check tolerance
Pressure hPa	: 500	- cm3/1000s. : 8.0
rack travel mm	: 0.40	+
Tolerance mm	: +- 0.10	
10(01 41100 11111		→ BREAKAWAY
Pressure hPa	: 600	
rack travel mm	: 1.35	+
Tolerance mm	: ← 0.05	∔ Rack travel in mm: 11.60
	- · - -	Rated speed rpm : 1145
		+ Tolerance 1/min : +- 5
START CUT-OUT		<u> </u>
Rated speed rpm	: > 100	
Rated speed rpm		
matea opeca i pili		- Continue to the Philadellia
Check		+ Rated speed rpm : 100
speed 1/min	: > 80	rack travel mm : 20.00
-pww-round		+ Tolerance mm : + 1.00
		1 10001 00100 11111

Del. quantity cm3/1000 strokes : 171.0 cm3/1000 strokes : + 8.0 Check tolerance cm3/1000s. : + 11.0

LOW IDLE

350 Rated speed rpm : Del. quantity cm3/1000 strokes : 15.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 08.04.96 : ISO 4113

Combination No. : 9 400 083 454

Injection pump

Pump designation : PES6A100b320/3RS2691

EP type number : 9 410 230 025

Governor

Governer design. : RSV400...900A7C2209

: -1R Governer no. : 9 420 083 232

Cust. part No. :

Customer-spec. information

Customer : CUMMINS

Motor

: 6 CT 8.3

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : \leftarrow 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 10.00

Check

Tolerance : +- 0.10

tolerance °NW : + 0.23

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50
Difference * CS : 3.50

BASIC SETTING

Rated speed rpm : 900

1	Check tolerance
Rack travel in mm: 12.75	cm3/1000s. : +- 3.0
Tolerance mm : +- 0.05	Spreed
1 occi arice iiiii o. o.	cm3/1000 strokes : 3.5
Del. quantity	Check tolerance
cm3/1000 strokes : 129.5	cm3/1000s. : 8.0
Timb/1000 strokes . 127.5	CHD7 10003 0.0
cm3/1000 strokes : + 1.0	
Times to the strokes . The strokes .	
Check tolerance	CONTROL LEVER
cm3/1000s. : +- 3.0	CONTROL ELVER
T	control lever
Spreed	position degree : 108.0
cm3/1000 strokes : 3.5	tolerance degree : +- 4.0
Chib/ 1000 strokes . 5.5	toterance degree . 4.0
Check tolerance	
cm3/1000s. : 8.0	ASSEMBLY GOVERNOR SETTING
(iib) 10003	ASSEMBLI GOVERNOR SETTING
Rated speed rpm : 400	Rated speed rpm : 943
T	rack travel mm : 11.70
I	THE THE THE
Rack travel in mm: 5.70	Rated speed rpm : 979
Tolerance mm : + 0.10	Tolerance 1/min : +- 2
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 18.5	TOOK CTOVEC HAN
cm3/1000 strokes : + 2.0	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1000s. : +- 4.5	Rated speed rpm : 1100
Spreed	Added Speed (pill : 1100
cm3/1000 strokes : 5.5	Rated speed rpm : 944
Check tolerance	rack travel mm : 11.70
cm3/1000s. : 9.0	I dek eldace um 1 1110
1	Rated speed rpm : 980
\mathbf{I}	Tolerance 1/min : +- 2
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	THE CONTRACT
WITH GOVERNOR	rack travel mm : 0.85
1	Tolerance mm : + 0.55
	Rated speed rpm : 1100
GUIDE SLEEVE POSITION	THE STATE OF THE S
-	Rated speed rpm : 945
Rated speed rpm : 800	rack travel mm : 11.70
Rack travel in mm: 0.65	Rated speed rpm : 981
Tolerance mm : + 0.35	Tolerance 1/min : +- 2
<u> </u>	rack travel mm : 4.00
governor spring	
pre-tension +	rack travel mm : 0.85
click setting x : 5.25	Tolerance mm : + 0.55
_	Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 946
+	rack travel mm : 11.70
Rated speed rpm : 900	
Aneroid pressure	Rated speed rpm : 982
hPa : -	Tolerance 1/min : + 2
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 129.5	
cm3/1000 strokes : +- 1.0	rack travel mm : 0.85
<u> </u>	Tolerance mm : +- 0.55
'	

1100 Rated speed rpm 947 Rated speed rpm 11,70 rack travel mm 983 Rated speed rpm Tolerance 1/min 4.00 rack travel mm rack travel mm 0.85 Tolerance mm : + 0.55Rated speed rpm 1100 948 Rated speed rpm rack travel mm 11.70 Rated speed rpm 984 Tolerance 1/min 2 rack travel mm 4.00 rack travel mm 0.85 Tolerance mm : + - 0.551100 Rated speed rpm LOW IDLE control lever 77.0 position degree tolerance degree : +-Setting point w/out bumper spring 400 Rated speed rpm 5.20 rack travel mm Testing: Rated speed rpm 400 : 5.70 rack travel mm : + 0.10Tolerance mm 2.00 rack travel mm Rated speed rpm 440 30 Tolerance 1/min 100 Rated speed rpm CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 900 rack travel mm 12.75 Tolerance mm : +- 0.05

550

12.80

: +- 0.10Tolerance mm Rated speed rpm 400 14.30 rack travel mm Tolerance mm : + 0.30STARTING FUEL DELIVERY Rated speed rpm 100 20.00 rack travel mm : +- 1.00 Tolerance mm Del. quantity cm3/1000 strokes : 142.0 cm3/1000 strokes : +- 8.0 Check tolerance cm3/1000s. : + 11.0LOW IDLE Rated speed rpm 400 : Del. quantity cm3/1000 strokes : 18.5 cm3/1000 strokes : +-2.0 Check tolerance 4.5 cm3/1000s.Spreed 5.5 cm3/1000 strokes : Check tolerance cm3/1000s. 9.0

End of test specification sheet

Rated speed rpm rack travel mm

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.09.96 Edition : ISO 4113 Test oil

Combination No. : 9 400 083 462

Injection pump

Pump designation: PES6A100D320/3RS2691

: -5

: 9 400 084 031 EP type number

Governor

Governer design. : RSV400...900A7C2209

: -3R

: 9 420 083 262 Governer no.

Cust. part No. : 3354950

Customer-spec. information Customer : CUMMINS Motor : 6 CT 8.3 L

Power KW : 154.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Beginning of delivery differende

and maximum rack

travel Tolerance mm 10.50 : +- 1.50 : 3.50 Difference ° CS :

BASIC SETTING

Rated speed rpm : 860

Rack travel in mm: 13.35 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 142.5

cm3/1000 strokes : + 1.0

Spreed cm3/1000 strokes : 3.5 Tolerance degree : 4.0	Check tolerance cm3/1000s. : +- 3.0	control lever position degree : 111.0
cm3/1000S. : 8.0 Rated speed rpm : 928 rack travel mm : 12.30 Rack travel in mm: 5.80 rack travel mm : 4.00 rolerance mm : + 0.10 rack travel mm : 4.00 pel. quantity rack travel mm : 0.85 cm3/1000 strokes: 2.0 rack travel mm : 0.85 cm3/1000S. : + 4.5 Rated speed rpm : 1100 Spreed Rated speed rpm : 929 rack travel mm : 4.03 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 978 Tolerance 1/min : + 4.00 (B) SETTINS OF INJECTION PUMP WITH GOVERNOR Rated speed rpm : 978 Tolerance 1/min : + 4.00 GUIDE SLEEVE POSITION Rated speed rpm : 0.85 Rated speed rpm : 930 rack travel mm : 4.00 Rated speed rpm : 800 Rated speed rpm : 10.55 Rated speed rpm : 979 Tolerance 1/min : + 4.00 Rated speed rpm : 979 Tolerance 1/min : + 4.00 Rated speed rpm : 0.85 Tolerance 1/min : + 4.00 Rated speed rpm		
Rated speed rpm : 928 rack travel mm : 12.30 Rated speed rpm : 928 Rated speed rpm : 977 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 20.0 cm3/1000S strokes : 20.0 cm3/1000S strokes : 20.0 cm3/1000S strokes : 5.5 Check tolerance cm3/1000S : + 4.5 Spreed cm3/1000S : 9.0 GUIDE SLEEVE POSITION Rated speed rpm : 978 Rated speed rpm : 978 Tolerance mm : + 0.55 Rated speed rpm : 978 Tolerance mm : + 0.55 Rated speed rpm : 978 Tolerance mm : + 0.55 Rated speed rpm : 978 Tolerance rpm : 978 Tolerance rpm : 978 Tolerance rpm : 978 Tolerance rpm : 1100 GUIDE SLEEVE POSITION Rated speed rpm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 930 rack travel mm : 0.85 Tolerance rpm : 930 rack travel mm : 12.30 Rated speed rpm : 930 rack travel mm : 12.30 Rated speed rpm : 930 rack travel mm : 12.30 Rated speed rpm : 930 rack travel mm : 12.30 Rated speed rpm : 930 rack travel mm : 12.30 Rated speed rpm : 930 rack travel mm : 12.30 Rated speed rpm : 979 Tolerance mm : + 0.35 Rated speed rpm : 979 Tolerance f/min : + 4 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 0.85 Tolerance 1/min : + 4 rack travel mm : 0.85 Tolerance 1/min : + 4 rack travel mm : 0.85 Tolerance 1/min : + 4 rack travel mm : 0.85 Tolerance 1/min : + 4 rack travel mm : 0.85		ASSEMBLY GOVERNOR SETTING
Rack travel in mm : 5.80		
cm3/1000 strokes : 20.0 rack travel mm : 0.85 cm3/1000 strokes : + 2.0 tolerance mm : + 0.55 Check tolerance cm3/1000s. : + 4.5 spreed cm3/1000 strokes : 5.5 Rated speed rpm : 929 cm3/1000s. : 9.0 Rated speed rpm : 978 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 978 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 978 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 978 GUIDE SLEEVE POSITION Rated speed rpm : 930 Rated speed rpm : 800 Rated speed rpm : 930 Rated speed rpm : 930 rack travel mm : 12.30 Rated speed rpm : 979 Rated speed rpm : 979 Tolerance mm : + 0.35 Rated speed rpm : 979 Tolerance mm : + 0.35 Rated speed rpm : 979 Tolerance mm : + 0.35 Tolerance 1/min : + 4 Tolerance mm : + 0.35 Tolerance 1/min : + 4 Tolerance mm : + 0.35 Tolerance 1/min : + 4 Rated speed rpm : 930 Rated speed rpm : 931 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 930 Rated speed rpm : 930 Rated speed rpm : 930 Rated speed rpm : 930 Tolerance 1/min : + 4 Tolerance mm :	Tolerance mm : + 0.10	+ Tolerance 1/min : +- 4
Rated speed rpm 929	cm3/1000 strokes : 20.0 cm3/1000 strokes : + 2.0 Check tolerance	Tolerance mm : + 0.55
cm3/1000S. : 9.0 Rated speed rpm : 978 (B) SETTING OF INJECTION PUMP WITH GOVERNOR rack travel mm : 4.00 GUIDE SLEEVE POSITION Rated speed rpm : 0.85 Rated speed rpm : 800 Rated speed rpm : 930 Rack travel in mm : 0.65 Tolerance 1/min : + 4 Tolerance mm : + 0.35 Tolerance 1/min : + 4 Tolerance spring pre-tension rack travel mm : 0.85 Click setting x : 6.00 Rated speed rpm : 910 Rated speed rpm : 860 Rated speed rpm : 931 Rack d speed rpm : 931 rack travel mm : 12.30 Rated speed rpm : 931 rack travel mm : 0.85 Rated speed rpm : 931 rack travel mm : 0.55 Rated speed rpm : 931 rack travel mm : 0.55 Rated speed rpm : 931 rack travel mm : 0.55 Rated speed rpm : 931 rack travel mm : 0.55 Rated speed rpm : 932 rack travel mm : 0.85 Considerance rms : + 0.55 rack	Spreed cm3/1000 strokes : 5.5	Rated speed rpm : 929 rack travel mm : 12.30
## WITH GOVERNOR	cm3/1000s. : 9.0	+ Tolerance 1/min : +- 4
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.00 Rated speed rpm : 931 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 860 Aneroid pressure hPa : - 200 Bel. quantity cm3/1000 strokes : 142.5 cm3/1000 strokes : 142.5 cm3/1000 strokes : 4.00 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000s. : 8.0 Rated speed rpm : 932 Rated speed rpm : 933		+ Tolerance mm : $+$ 0.55
Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 6.00 Rated speed rpm : 979 Tolerance 1/min : + 4 Tolerance mm : 4.00 Rated speed rpm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 931 rack travel mm : 12.30 Rated speed rpm : 860 Rated speed rpm : 980 Aneroid pressure hPa : - 7 Del. quantity cm3/1000 strokes : 142.5 cm3/1000 strokes : 142.5 cm3/1000 strokes : 4.00 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s : 8.0 CONTROL LEVER Rated speed rpm : 979 Tolerance 1/min : + 4 rack travel mm : 0.85 Tolerance mm : 4.00 Rated speed rpm : 980 Tolerance 1/min : + 4 rack travel mm : 0.85 Tolerance mm : 4.00 Rated speed rpm : 932 rack travel mm : 12.30 Rated speed rpm : 932 rack travel mm : 12.30 Rated speed rpm : 981 Tolerance 1/min : + 4 rack travel mm : 4.00 CONTROL LEVER		
Tolerance mm	Rack travel in mm : 0.65	Tolerance 1/min : +- 4
Rated speed rpm : 860	pre-tension	+ Tolerance mm : \leftarrow 0.55
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 142.5 cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000 strokes : +- 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP	
cm3/1000 strokes : 142.5 rack travel mm : 0.85 cm3/1000 strokes : + 1.0 Tolerance mm : + 0.55 Check tolerance cm3/1000s. : + 3.0 Rated speed rpm : 932 cm3/1000 strokes : 3.5 rack travel mm : 12.30 Check tolerance cm3/1000s. : 8.0 Rated speed rpm : 981 Tolerance 1/min : + 4 rack travel mm : 4.00 CONTROL LEVER rack travel mm : 0.85	Aneroid pressure hPa : -	+ Tolerance 1/min : +- 4
Rated speed rpm : 932 rack travel mm : 12.30 Rated speed rpm : 981 Tolerance 1/min : +- 4 rack travel mm : 4.00 CONTROL LEVER rack travel mm : 0.85	cm3/1000 strokes : 142.5 cm3/1000 strokes : +- 1.0 Check tolerance	+ Tolerance mm : + 0.55
CONTROL LEVER - Rated speed rpm : 981 - Tolerance 1/min : +- 4 - rack travel mm : 4.00 - rack travel mm : 0.85	Spreed cm3/1000 strokes : 3.5	
		+ Tolerance 1/min : +- 4
		Track travel mm : 0.85

Tolerance mm : + 0.55
Rated speed rpm : 1100

rack travel mm : 12.30

rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : + 0.55

LOW IDLE

control lever
position degree : 80.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 400 rack travel mm : 5.30

Testing:

Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 445
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. :> 19.00

TORQUE CONTROL

Rated speed rpm : 860 rack travel mm : 13.35 Tolerance mm : +- 0.05

Rated speed rpm : 600 rack travel mm : 13.40 Tolerance mm : + 0.10

Rated speed rpm : 450 rack travel mm : 14.00 Tolerance mm : +- 0.30

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : + 8.0 Check tolerance cm3/1000s. : + 11.0

LOW IDLE

Rated speed rpm 400 Del. quantity cm3/1000 strokes : 20.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-4.5 Spreed cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.09.96 : ISO 4113

Combination No.

: 9 400 085 257

Injection pump

Pump designation : PES4A80D320RS1282 EP type number : 9 400 083 056

Governor

Governer design. : RSV350...1100A2C2129

: -6R

Governer no.

: 9 420 083 270

Cust. part No. :

Customer-spec. information : MWM Customer

Motor

: D 229-4

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar

Test Lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 2.25 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Beginning of delivery differende

and maximum rack

10.50 travel Tolerance mm : +- 1.50 Difference * CS : 4.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 8.75 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 49.0

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

cm3/1000s. : +- 2.0

Spreed

cm3/1000 strokes : 2.5	+ RATED SPEED
Check tolerance	+
cm3/1060s. : 4.0	+ rack travel mm : 7.70
Data di ancesta anno 1750	Rated speed rpm : 1145
Rated speed rpm : 350	+ Tolerance 1/min : +- 5
	rack travel mm : 4.00
Rack travel in mm : 6.50	Rated speed rpm : 1195
Tolerance mm : +- 0.10	+ Tolerance 1/min : + 15
Del. quantity	†
cm3/1000 strokes : 11.5 cm3/1000 strokes : +- 1.5	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
Check tolerance	Rated speed rpm : 1300
cm3/1000s. : + 3.5	+
Spreed	+
cm3/1000 strokes : 4.0	1011 701 5
Check tolerance cm3/1000s. : 6.0	LOW IDLE
· · · · · · · · · · · · · · · · · · ·	I
	∔ control lever
(B) SETTING OF INJECTION PUMP	position degree : 76.0
WITH GOVERNOR	+ tolerance degree : +- 4.0
	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 350
65106 366646 10311104	rack travel mm : 6.00
Rated speed rpm : 800	+
	+ Testing:
Rack travel in mm: 0.65	750
Tolerance mm : +- 0.35	+ Rated speed rpm : 350 + rack travel mm : 6.50
governor spring	Tolerance ma : + 0.10
pre-tension	+
click setting x : 5.00	rack travel mm : 2.00
	Rated speed rpm : 635
ENIL LOAD DELTWEDY AT ENIL LOAD STOD	+ Tolerance 1/min : +- 30
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1100	+
Aneroid pressure	+ CRT mm min. : > 19.00
hPa : -	†
Del. quantity	TOPOLIE CONTROL
cm3/1000 strokes : 49.0 cm3/1000 strokes : +- 0.5	$\stackrel{\lambda}{ m L}$ TORQUE CONTROL
Check tolerance	Rated speed rpm : 1100
cm3/1000s. : +- 2.0	rack travel mm : 8.75
Spreed	Tolerance mm : + 0.05
cm3/1000 strokes : 2.5	† n. l
Check tolerance	+ Rated speed rpm : 500
cm3/1000s. : 4.0	+ rack travel mm : 10.05 + Tolerance mm : +- 0.05
	T TOTAL GRADE (IMI) : TOTAL GRADE
	Rated speed rpm : 900
CONTROL LEVER	rack travel mm : 9.25
	Tolerance mm : + 0.15
control lever	†
position degree : 98.0 tolerance degree : +- 4.0	I
toterance degree : T 4.0	Τ

FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : -	
hPa : -	
· · · · · · · · · · · · · · · · · · ·	
Rated speed rpm : 500	
Del. quantity	
cm3/1000 strokes : 51.0 cm3/1000 strokes : +- 1.5	
Check tolerance	
cm3/1000s. : +- 3.0	
Spreed	
cm3/1000 strokes : 3.5	
Check tolerance	
cm3/1000s. : 7.0	
A	
Aneroid pressure	
Rated speed rpm : 900	
Del. quantity	
cm3/1000 strokes : 50.0	
cm3/1000 strokes : +- 1.5	
Check tolerance	
cm3/1000s. : + 3.0	
Spreed	
cm3/1000 strokes : 3.5	
Check tolerance	
Check tolerance cm3/1000s. : 7.0	
cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 11.5	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 11.5 cm3/1000 strokes : + 1.5	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 11.5 cm3/1000 strokes : + 1.5 Check tolerance	
Cm3/1000s. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 11.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5	
Cm3/1000S. : 7.0 BREAKAWAY Rack travel in mm : 7.70 Rated speed rpm : 1145 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 11.5 cm3/1000 strokes : + 1.5 Check tolerance	

Check tolerance cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16.09.96

Test oil

Combination No. : 9 400 085 266

Injection pump

Pump designation : PES6A95D410RS2751

EP type number : 9 400 084 013

Governor

Governer design. : RSV650...1250A8C2231

: L Governer no. : 9 420 083 229

Cust. part No. :

Customer-spec. information

Customer : FORD Motor : 6,6 L NA Power KW : 101.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 017

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

800

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50

Difference * CS : 6.50

BASIC SETTING

Rated speed rpm : 1220

Rack travel in mm : 11.05

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 82.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

	+		
Spreed cm3/1000 strokes :	3.5	control lever position degree tolerance degree	: 101.0 : +- 4.0
Check tolerance cm3/1000s. :	8.0	RATED SPEED	
Rated speed rpm : 0	650	rack travel mm Rated speed rpm Tolerance 1/min	
Check tolerance cm3/1000s. : +- Spreed cm3/1000 strokes : Check tolerance	0.10 9.0 2.0 4.5 5.5	rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: 1298 : +- 3 : 0.85 : +- 0.55
cm3/1000s. :	9.0	LOW IDLE	·
(B) SETTING OF INJECTION WITH GOVERNOR	N PUMP	control lever position degree tolerance degree	
GUIDE SLEEVE POSITION	<u> </u>	Setting point w/o	ut bumper spring
, , , ,	800	Rated speed rpm rack travel mm	: 650 : 6.30
Rack travel in mm : Tolerance mm : +-		Testing:	
<pre>governor spring pre-tension click setting x :</pre>	3.00	Rated speed rpm rack travel mm Tolerance mm	: 650 : 6.80 : +- 0.10
FULL LOAD DELIVERY AT FU	JLL LOAD STOP	rack travel mm Rated speed rpm Tolerance 1/min	: 760
Aneroid pressure	_	Rated speed rpm	: 100
Del. quantity cm3/1000 strokes :	82.0	CRT mm min.	: > 19.00
Check tolerance cm3/1000s. : +-	+	TORQUE CONTROL	
Spreed cm3/1000 strokes : Check tolerance cm3/1000s. :	3.5	Rated speed rpm rack travel mm Tolerance mm	: 1220 : 11.05 : + 0.05
		Rated speed rpm rack travel mm Tolerance mm	
CONTROL LEVER	+		

FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 008 Rated speed rpm Del. quantity cm3/1000 strokes : 71.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 Spreed cm3/1000 strokes : 5.0 Check tolerance cm3/1000s.8.0 **BREAKAWAY** 10.00 Rack travel in mm : Rated speed rpm : 1268 Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm : 100 20.50 rack travel mm : : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 160.0 cm3/1000 strokes : +- 8.0Check tolerance cm3/1000S. : +- 11.0 LOW IDLE 650 Rated speed rpm Del. quantity cm3/1000 strokes : 9.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed cm3/1000 strokes : 5.5 Check tolerance 9.0 cm3/1000S.

End of test specification sheet

D10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.09.96 : ISO 4113

Combination No. : 9 400 085 270

Injection pump

Pump designation : PES6A90D320RS2718 : 9 400 084 003 EP type number

Governor

Governer design. : RSV350...1400A2B2215

: -1R

: 9 420 083 231 Governer no.

Cust. part No. :

Customer-spec. information : MWM Customer : D229/6 Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

173.5 bar : + 1.5 Tolerance bar

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : +- 0.05 Tolerance mm Check tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

Beginning of delivery differende

and maximum rack

travel 10.50 : +- 1.50 Tolerance mm Difference * CS : 3.50

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 8.55 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 62.0

cm3/1000 strokes : +-0.5

Check tolerance : **←** 2.5 cm3/1000s.

		+
Spreed cm3/1000 strokes	: 3.0	control lever position degree : 59.0 tolerance degree : + 4.0
Check tolerance cm3/1000s.	: 7.0	RATED SPEED
Rated speed rpm	: 350	rack travel mm : 7.50 Rated speed rpm : 1445 Tolerance 1/min : +- 5
Spreed cm3/1000 strokes	: + 0.10 : 13.0 : + 2.0 : + 4.0	rack travel mm : 4.00 Rated speed rpm : 1490 Tolerance 1/min : +- 15 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1650
Check tolerance cm3/1000S.	: 7.0	LOW IDLE
(B) SETTING OF INJUNITH GOVERNOR	ECTION PUMP	control lever position degree : 25.0 tolerance degree : + 4.0
GUIDE SLEEVE POSIT	ION	+ Setting point w/out bumper spring
Rated speed rpm	: 800	Rated speed rpm : 350 + rack travel mm : 5.00
Rack travel in mm Tolerance mm		Testing:
governor spring pre-tension click setting x	: 5.00	Rated speed rpm : 350 rack travel mm : 5.50 Tolerance mm : + 0.10
FULL LOAD DELIVERY		rack travel mm : 2.00 Rated speed rpm : 590 Tolerance 1/min : +- 30
Rated speed rpm Aneroid pressure hPa	: 1400 : –	Rated speed rpm : 100
Del. quantity cm3/1000 strokes cm3/1000 strokes	: - : 62.0	CRT mm min. : > 19.00
Check tolerance cm3/1000s.	: ← 0.3 : ← 2.5	TORQUE CONTROL
Spreed cm3/1000 strokes : Check tolerance		Rated speed rpm : 1400 rack travel mm : 8.55 Tolerance mm : + 0.05
cm3/1000s. :	. 7.0	Rated speed rpm : 500 rack travel mm : 9.15 Tolerance mm : +- 0.05
CONTROL LEVER		Rated speed rpm : 900 rack travel mm : 8.95

FUEL DELIVERY CHAI Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes	: - : 500 : 57.0 : + 1.5
hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes	: 57.0
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes	: 57.0
Del. quantity cm3/1000 strokes cm3/1000 strokes	: 57.0
cm3/1000 strokes	
	: +- 1.5
Check tolerance	
cm3/1000s.	: ← 3.5
Spreed	
cm3/1000 strokes Check tolerance	: 4.0
cm3/1000s.	: 8.0
Aneroid pressure	
hPa Rated speed rpm	: 900
Del. quantity	
cm3/1000 strokes	: 65.0
cm3/1000 strokes Check tolerance	: +- 1.5
cm3/1000s.	: ← 3.5
Spreed	, ,
cm3/1000 strokes Check tolerance	: 4.0
cm3/1000s.	: 8.0
·····	
BREAKAWAY	
Dada kansal ka sa	. 7.50
Rack travel in mm Rated speed rpm	
Rated speed rpm Tolerance 1/min	; - 5
STARTING FUEL DELI	IVERY
Rated speed rpm	: 100
rack travel mm	: 20.00
Tolerance mm	: + 1.00
OU THE	
LOW IDLE	
Rated speed rpm	: 350
Del. quantity cm3/1000 strokes	: 13.0
cm3/1000 strokes	

Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 18.09.96 : ISO 4113

Combination No. : 9 400 085 283

Injection pump

Pump designation : PES6A90D410RS2293

EP type number : 0 410 896 031

Governor

Governer design. : RSV350...1250A0C1150

: -3L

Governer no.

: 9 420 083 255

Cust. part No. :

Customer-spec. information

Customer

: MBB

Motor

: OM 352-A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

173.5

Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.20

Tolerance mm

: +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 10.05

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 62.0

cm3/1000 strokes : + 0.5

Check tolerance cm3/1000s.

: +- 2.5

Spreed

cm3/1000 strokes :

3.0

Check tolerance

cm3/1000s.

7.0

D14

Rated speed rpm : 350	Tolerance 1/min : +- 5
Rack travel in mm : 7.20 - Tolerance mm : + 0.10 - Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1350 Tolerance 1/min : +- 15
<pre>cm3/1000 strokes : 12.0 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0</pre>	rack travel mm : 0.85 Tolerance mm : - 0.55 Rated speed rpm : 1450
Spreed - cm3/1000 strokes : 4.5 - Check tolerance -	LOW IDLE
cm3/1000s. : 7.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 350
•	rack travel mm : 6.70
Rated speed rpm : 800	Testing:
Rack travel in mm : 0.65 - Tolerance mm : + 0.35 -	Rated speed rpm : 350
governor spring	rack travel mm : 7.20 Tolerance mm : + 0.10
pre-tension - click setting x : 3.50 -	rack travel mm : 2.00 Rated speed rpm : 460 Tolerance 1/min : +- 30
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1250 Aneroid pressure	CRT mm min. : > 19.00
hPa : - 1 Del. quantity	
cm3/1000 strokes : 62.0 - cm3/1000 strokes : + 0.5	TORQUE CONTROL
Check tolerance	Rated speed rpm : 1250
cm3/1000s. : +- 2.5 Spreed	rack travel mm : 10.05 Tolerance mm : +- 0.05
cm3/1000 strokes : 3.0	
Check tolerance - cm3/1000s. : 7.0	Rated speed rpm : 500 rack travel mm : 10.10
	Tolerance mm : +- 0.10
	Rated speed rpm : 400_
CONTROL LEVER -	rack travel mm : 11.50 Tolerance mm : +- 0.30
control lever	+
position degree : 104.0 - tolerance degree ; +- 4.0	
RATED SPEED	
rack travel mm : 9.00 - Rated speed rpm : 1295	- BREAKAWAY

Rack travel in mm : 9.00
Rated speed rpm : 1295
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 200 rack travel mm : 14.50 Tolerance mm : + 0.30

LOW IDLE

Rated speed rpm : 350
Del. quantity
cm3/1000 strokes : 12.0
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.0
Spreed
cm3/1000 strokes : 4.5
Check tolerance
cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.09.96 Test oil : ISO 4113

Combination No. : 9 400 085 286

Injection pump

Pump designation : PES6A90D320RS2701 EP type number : 9 400 083 094

Governor

Governer design. : RSV350...1150A2B2097

: -2R

Governer no. : 9 420 083 224

Cust. part No.

Customer—spec. information Customer : MWM Motor : D 229-6 Power KW : 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.70
Tolerance mm : + 0.05
Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50
Difference CS : 4.50

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 9.25
Tolerance mm: +- 0.05

Del. quantity

cm3/1000 strokes : 62.5

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

_	↓
Spreed	control lever
cm3/1000 strokes : 3.0	position degree : 46.0
·	tolerance degree : +- 4.0
Check tolerance -	+
cm3/1000s. : 7.0	RATED SPEED
750	†
Rated speed rpm : 350 -	rack travel mm : 8.20
•	Rated speed rpm : 1195
Rack travel in mm: 6.00	Tolerance 1/min : + 5
Tolerance mm : +- 0.10	rack travel mm : 4.00
Del. quantity	Rated speed rpm : 1245
cm3/1000 strokes : 12.5	+ Tolerance 1/min : +- 15
cm3/1000 strokes : +- 2.0	-
Check tolerance	rack travel mm : 0.85
cm3/1000s. : +- 4.0	Tolerance mm : + 0.55
Spreed -	Rated speed rpm : 1400
cm3/1000 strokes : 4.5 -	+
Check tolerance -	+
cm3/1000s. : 7.0 -	
•	LOW IDLE
(D) OFFITAIR OF TAILFOFTON DIME	†
(B) SETTING OF INJECTION PUMP -	t control lever
₩ITH GOVERNOR -	position degree : 20.0
	tolerance degree : +- 4.0
	Local and degree 4.0
GUIDE SLEEVE POSITION -	Setting point w/out bumper spring
-	
Rated speed rpm : 800 -	Rated speed rpm : 350
	rack travel mm : 5.50
Rack travel in mm: 0.65	t
Tolerance mm : +- 0.35	Testing:
anyonon oppina	Rated speed rpm : 350
governor spring pre-tension	Rated speed rpm : 350 rack travel mm : 6.00
click setting x : 4.25	Tolerance mm : + 0.10
CLICK Setting X . 4.25	- Toter arice likili
	rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 600
-	Tolerance 1/min : +- 30
Rated speed rpm : 1150	
Aneroid pressure	Rated speed rpm : 100
hPa : -	<u> </u>
Del. quantity	CRT mm min. :> 19.00
cm3/1000 strokes : 62.5	
cm3/1000 strokes : +- 0.5 Check tolerance	- TORQUE CONTROL
cm3/1000s. : +- 2.5	L TORAGE CONTROL
Spreed	- Rated speed rpm : 1150
cm3/1000 strokes : 3.0	rack travel mm : 9.25
Check tolerance	- Tolerance mm : +- 0.05
cm3/1000s. : 7.0	-
+	- Rated speed rpm : 500
+	rack travel mm : 9.85
	Tolerance mm : +- 0.05
CONTROL LEVER -	Poted aread non . Onn
1	- Rated speed rpm : 800 - rack travel mm : 9.55
1	- rack travel mm : 9.55

rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	Tolerance mm	: +- 0.15
hPa : - Rated speed rpm : 500 Del. quantity : 54.5 cm3/1000 strokes : + 1.5 Check tolerance : - cm3/1000s : + 3.5 Spreed : - Check tolerance : - cm3/1000s : - Rated speed rpm : 800 Del. quantity : - Check tolerance : - cm3/1000 strokes : - Check tolerance : - cm3/1000 strokes : + 1.5 Check tolerance : - cm3/1000s : + 3.5 Spreed : - cm3/1000s : + 3.5 Spreed : - cm3/1000s : - BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 LOW IDLE Rated speed rpm : 350 Del. quantity : - cm3/1000 strokes	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 54.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : + 3.5 Spreed Cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 Aneroid pressure hPa : - Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		
Del. quantity cm3/1000 strokes : 54.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/10000 strokes : + 3.5 Spreed cm3/10000 strokes : 4.0 Check tolerance cm3/10000 strokes : 4.0 Check tolerance cm3/10000 strokes : 8.0 Aneroid pressure hPa : - Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 100 Check tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		500
Cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 Aneroid pressure hPa : - Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	Del. quantity	
Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 Aneroid pressure hPa	cm3/1000 strokes	; 54.5 · + 1.5
Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 Aneroid pressure hPa : - Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		
cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 Aneroid pressure hPa : - Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		: ← 3.5
Check tolerance cm3/1000S. : 8.0 Aneroid pressure hPa		: 4.0
Aneroid pressure hPa : - Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	Check tolerance	, ,,,,
hPa Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 20.00 Tolerance mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	cm3/1000s.	: 8.0
Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 20.00 Tolerance mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	Aneroid pressure	
Del. quantity cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 20.00 Tolerance mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		
cm3/1000 strokes : 60.5 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		: 000
Check tolerance cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	cm3/1000 strokes	
cm3/1000s. : + 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		: +- 1.5
cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		: - 3.5
Check tolerance cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		
cm3/1000s. : 8.0 BREAKAWAY Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		: 4.0
Rack travel in mm : 8.20 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5		: 8.0
Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	BREAKAWAY	
Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	Rack travel in mm Rated speed rpm Tolerance 1/min	: 8.20 : 1195 : + 5
rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	STARTING FUEL DEL	IVERY
Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 12.5	Rated speed rpm rack travel mm Tolerance mm	: 20.00
Del. quantity cm3/1000 strokes : 12.5	LOW IDLE	
Del. quantity cm3/1000 strokes : 12.5	Rated speed rom	: 350
	Del. quantity	
	cm3/1000 strokes cm3/1000 strokes	

Check tolerance cm3/1000s. : +- 4.0 Spreed cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.09.96 Test oil : ISO 4113

Combination No. : 9 400 085 297

Injection pump

Pump designation : PES6A95D41ORS2758-1

EP type number : 9 400 084 015

Governor

Governer design. : RQV350...1200AB1220

: -2L

: 9 420 080 252 Governer no.

Cust. part No. :

Customer-spec. information Customer : FORD Motor : 6,6 L TC : 138.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 017 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0 x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 14.05 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 109.0

cm3/1000 strokes : + 1.0

Check tolerance

: +- 3.0 cm3/1000s.

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000S. : 8.0

020

Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	: 6.80 : + 0.10 : 22.0 : + 2.0 : + 4.5	Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 3.0
Check tolerance	+		
cm3/1000s.	9.0	CONTROL LEVER	
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	control lever position degree tolerance degree	
GUIDE SLEEVE TRAVE	il I	control lever	
Rated speed rpm	: 1200	position degree tolerance degree	
guide sleeve	-	_	• • •••
travel mm Tolerance mm	: 7.80 : + 0.10	RATED SPEED	
loter drice min	+	rack travel mm	: 13.00
Rated speed rpm guide sleeve	: 350	Rated speed rpm Tolerance 1/min	
travel mm	: 1.90	rocerance minin	• • •
Tolerance mm	: + 0.20	rack travel mm	: 4.00 : 1395
Rated speed rpm guide sleeve	: 700	Rated speed rpm Tolerance 1/min	: +- 15
travel mm	: 4.30	rack travel mm	: 0.50
Tolerance mm	: + 0.20	Tolerance mm Rated speed rpm	: +- 0.50 : 1500
Rated speed rpm guide sleeve	: 500	wassa speed vp	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
travel mm	3.30	1011 701 5	
Tolerance mm	: + 0.20	LOW IDLE	
	: 270	control lever	
guide sleeve travel mm	: 1.00	position degree	
Tolerance mm	: + 0.20	tolerance degree	: +- 4.0
GUIDE SLEEVE POSIT	ION	control lever position degree tolerance degree	
Rated speed rpm	: 1400	_	
Rack travel in mm		Testing:	. 750
Tolerance mm	: +- 1.30	Rated speed rpm rack travel mm T⊂lerance mm	
FULL LOAD DELIVERY	AT FULL LOAD STOP		
Rated speed rpm	: 1200	Rated speed rpm	: 100
Tates opeca (pin	+	CRT mm min.	: > 10.00

	1	Nat minuta.
Rated speed rpm rack travel mm	: 395 : > 10.00	- Del. quantity - cm3/1000 strokes : 105.0 - cm3/1000 strokes : +- 2.0 - Check tolerance
TODOUE CONTROL		- cm3/1000s. : +- 4.0
TORQUE CONTROL	7	- Spreed - cm3/1000 strokes : 5.0
Rated speed rpm	: 1200	- Check tolerance - cm3/1000S. : 8.0
rack travel mm Tolerance mm	: 14.05 : + 0.05	- (115/10005. : 6.0
	+	Aneroid pressure
Rated speed rpm rack travel mm	: 14.05	- hPa : - - Rated speed rpm : 500
rack travel mm Tolerance mm	: +- 0.05	- Del. quantity
		- cm3/1000 strokes : 54.0 - cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE	1	- Check tolerance
COMPENSATOR TEST	+	cm3/1000s. : + 3.0
	<u>†</u>	- Spreed - cm3/1000 strokes : 3.5
SETTING	Ţ	- Check tolerance
		cm3/1000s. : 8.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 + 700 I	
rack travel mm	: 14.05	- BREAKAWAY
Tolerance mm	: +- 0.05	•
MEASUREMENT	‡	Rack travel in mm : 13.00
	+	Rated speed rpm : 1250
Pressure hPa Rated speed rpm	: - : 500 +	Tolerance 1/min : +- 5
Rated speed rpm	. 500	•
Rated speed rpm	: 500	STARTING FUEL DELIVERY
Pressure hPa	: 490	STARTING FUEL DELIVER!
rack travel mm	: 3.40	Rated speed rpm : 100
Tolerance mm	: +- 0.20	rack travel mm : 20.50 Tolerance mm : + 0.50
Pressure hPa	: 355	Del. quantity
rack travel mm	: 1.55 	cm3/1000 strokes : 160.0
Tolerance mm	: +- 0.05	cm3/1000 strokes : +- 7.5 Check tolerance
		cm3/1000s. : +- 10.0
START CUT-OUT	†	
Rated speed rpm	: > 100	
Rated speed rpm Rated speed rpm	: < 270	101 701 5
Check	1	LOW IDLE
speed 1/min	: > 80	Rated speed rpm : 350
Check	200	Del. quantity
speed 1/min	: < 290	cm3/1000 strokes : 22.0 cm3/1000 strokes : +- 2.0
	+	Check tolerance
FUEL DELIVERY CHA	RACTERISTICS	cm3/1000s. : +- 4.5 Spreed
Aneroid pressule	1	cm3/1000 strokes : 5.5
Aneroid pressule hPa Rated speed run	700 : 850	cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.09.96 Test oil :

Combination No. : 9 400 085 299

Injection pump

Pump designation : PES6A95D410RS2751 EP type number : 9 400 084 013

Governor

Governer design. : RSV650...1250A8C2231

: -2L

Governer no. : 9 420 083 236

Cust. part No. :

Customer-spec. information Customer : FORD : 6,6 L TC Motor : 123.8 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 017 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50 Difference ° CS : 6.50

BASIC SETTING

Rated speed rpm : 1220

Rack travel in mm : 12.55 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 99.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

	1	_	
Spreed cm3/1000 strokes	: 3.5	control lever position degree tolerance degree	
Check tolerance cm3/1000s.	: 8.0	RATED SPEED	
Rated speed rpm	: 650	rack travel mm Rated speed rpm Tolerance 1/min	
Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	: + 0.10 : 9.0 : + 2.0 : + 4.5 : 5.5	rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: 4.00 : 1303 : +- 3 : 0.85 : +- 0.55
cm3/1000s.	: 9.0 	LOW IDLE	
(B) SETTING OF INJUNITH GOVERNOR	ECTION PUMP	control lever position degree tolerance degree	: 76.0 : +- 4.0
GUIDE SLEEVE POSIT	ION	Setting point w/o	out bumper spring
Rated speed rpm Rack travel in mm	+	Rated speed rpm rack travel mm	
Tolerance mm		Testing:	
governor spring pre-tension click setting x	: 3.00	Rated speed rpm rack travel mm Tolerance mm	: 6.80
FULL LOAD DELIVERY	+	rack travel mm Rated speed rpm Tolerance 1/min	
Rated speed rpm : Aneroid pressure hPa :		Rated speed rpm	: 100
Del. quantity cm3/1000 strokes cm3/1000 strokes	99.0 +- 1.0	CRT mm min.	: > 19.00
Check tolerance	+ 3.0	TORQUE CONTROL	
Spreed	3.5	Rated speed rpm rack travel mm Tolerance mm	
		Rated speed rpm rack travel mm Tolerance mm	: 12.55
CONTROL LEVER	Ţ		

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 800 Del. quantity

cm3/1000 strokes : 85.0 cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s.

cm3/1000s. : +- 4.0

Spreed

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 8.0

BREAKAWAY

Rack travel in mm : 11.50
Rated speed rpm : 1268
Tolerance 1/min : +- 3

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 160.0 cm3/1000 strokes : + 8.0

Check tolerance

cm3/1000s. : +- 11.0

LOW IDLE

Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 9.0 cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 306

Injection pump

Pump designation : PES6A90D410RS2596 EP type number : 0 410 896 073

Governor

Governer design. : RQV300...1400AB1066

: -7L

Governer no. : 9 420 080 267

Cust. part No. : 0180742402

Customer-spec. information Customer : MBB
Motor : 0M352A
Power KW : 121.4

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 12.45 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 78.0

cm3/1000 strokes : + 0.5

Check tolerance cm3/1000s. : + 2.5

Spreed

cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. : 7.0

D27

Rated speed rpm : 300	+ Check tolerance + cm3/1000s. : +- 2.5
Rack travel in mm : 9.00 Tolerance mm : +- 0.10	+ Spreed + cm3/1000 strokes : 3.0 + Check tolerance
Del. quantity cm3/1000 strokes : 12.0 cm3/1000 strokes : +- 2.0	+ cm3/1000s. : 7.0
Check tolerance cm3/1000s. : +- 4.0 Spreed	CONTROL LEVER
cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.0	control lever position degree : 64.0
	tolerance degree : +- 4.0 control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : 114.0 tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	RATED SPEED rack travel mm : 11.50
Rated speed rpm : 300 guide sleeve	+ rack travel mm : 11.50 + Rated speed rpm : 1445 + Tolerance 1/min : +- 5
travel mm : 1.05 Tolerance mm : +- 0.25	rack travel mm : 4.00 Rated speed rpm : 1590
Rated speed rpm : 1500 guide sleeve travel mm : 8.55	Tolerance 1/min : +- 20
Tolerance mm : +- 0.05	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1750
Rated speed rpm : 500 guide sleeve travel mm : 2.55	<u>+</u>
Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 750 guide sleeve travel mm : 4.20	control lever position degree : 71.0
Tolerance mm : + 0.10	tolerance degree : + 4.0
GUIDE SLEEVE POSITION	<pre>control lever position degree : 21.0 tolerance degree : + 4.0</pre>
Rated speed rpm : 1500 Rack travel in mm : 16.50	Testing:
Tolerance mm : + 1.30	Rated speed rom : 300 rack travel mm : 9.00 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 100
Rated speed rpm : 1400 Aneroid pressure hPa : 700	CRT mm min. : > 10.30
Del. quantity cm3/1000 strokes : 78.0	Rated speed rpm : 620
cm3/1000 strokes : +- 0.5	TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.45 : + 0.05 : 500 : 13.25 : + 0.05	Del. quantity - cm3/1000 strokes : 66.5 - cm3/1000 strokes : + 1.5 - Check tolerance - cm3/1000s. : + 3.5 Aneroid pressure - hPa : 700 - Rated speed rpm : 1000 - Del. quantity - cm3/1000 strokes : 76.5 - cm3/1000 strokes : + 1.5 - Check tolerance - cm3/1000s. : + 3.5
ANEROID/ALTITUDE COMPENSATOR TEST		Aneroid pressure hPa : -
SETTING		Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 57.5
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 13.25 : ← 0.05	cm3/1000 strokes : +- 0.5 Check tolerance cm3/1000s. : +- 2.5
MEASUREMENT		BREAKAWAY
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 12.35 : + 0.05	Rack travel in mm: 11.50 Rated speed rpm: 1445 Tolerance 1/min: +- 5
Rated speed rpm		
Pressure hPa rack travel mm Tolerance mm	: 12.60 : + 0.10	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00 Tolerance mm : + 0.20
Pressure hPa rack travel mm Tolerance mm		Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 76.0 cm3/1000 strokes : + 7.5 Check tolerance
START CUT-OUT		cm3/1000s. : + 10.0
Rated speed rpm Rated speed rpm		<u> </u>
Check speed 1/min Check	: > 80	LOW IDLE Rated speed rpm : 300
speed 1/min	: < 240	+ Del. quantity + cm3/1000 strokes : 12.0 + cm3/1000 strokes : +- 2.0
FUEL DELIVERY CHA	ARACTERISTICS	Check tolerance cm3/1000s. : +- 4.0
Aneroid pressure hPa Rated speed rpm	: 700 : 500	Spreed cm3/1000 strokes : 4.5 Check tolerance
nated speed (pii)	. 200	+ cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.07.96 : ISO 4113

Combination No. : 9 400 085 310

Injection pump

Pump designation : PES6A95D410RS2772

EP type number : 9 400 084 018

Governor

Governer design. : RQV300...1300AB1066

: -8L

Governer no.

: 9 420 080 279

Cust. part No. :

Customer-spec. information

Customer Motor

: MBB : OM 366 LA

Power KW

: 155.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : x length mm :

600

REMARKS

(A) INJECTION PUMP SEITING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar $: \leftarrow 1.0$

Prestroke mm : 3.25

: + 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.15

Tolerance mm

: **←** 0.05

Del. quantity

cm3/1000 strokes : 99.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: +-3.0

Spreed

cm3/1000 strokes :

3.5

Check tolerance

cm3/1000s. :

8.0

Rated speed rpm : 300	- Check tolerance
	- cm3/1000s. : + 3.0
	- Spreed
Rack travel in mm: 7.00	- cm3/1000 strokes : 3.5
Tolerance mm : +- 0.10	- Check tolerance
Del. quantity	- cm3/1000s. : 8.0
cm3/1000 strokes : 11.0	
cm3/1000 strokes : +- 2.0	
Check tolerance	
cm3/1000s. : + 4.5	- CONTROL LEVER
Spreed	- CONTROL LEVER
cm3/1000 strokes : 5.5	- control lever
Check tolerance	position degree : 109.0
cm3/1000s. : 9.0	- tolerance degree : +- 4.0
CIID/ 10003 9.0	toterance degree . 1 4.0
	RATED SPEED
(B) SETTING OF INJECTION PUMP	RATED SPEED
	r - rack travel mm : 10.10
WITH GOVERNOR	
1	- Rated speed rpm : 1365
CUANT OF THE TOAKE	- Tolerance 1/min : ← 5
GUIDE SLEEVE TRAVEL	/ 00
Dated analysis 700	rack travel mm : 4.00
Rated speed rpm : 300	Rated speed rpm : 1500
guide sleeve	Tolerance 1/min : +- 15
travel mm : 1.05	
Tolerance mm : + 0.25	- rack travel mm : 0.50
t	- Tolerance mm : +- 0.50
Rated speed rpm : 1500	- Rated speed rpm : 1650
guide sleeve	
travel mm : 8.55	,
travel mm : 8.55 Tolerance mm : + 0.05	
Tolerance mm : + 0.05	- LOW IDLE
Tolerance mm : + 0.05 Rated speed rpm : 500	LOW IDLE
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve	<u>.</u>
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55	- - control lever
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve	<u>.</u>
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55	- - control lever
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55	- - control lever - position degree : 68.0
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve	- - control lever - position degree : 68.0
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20	control lever position degree : 68.0 tolerance degree : + 4.0
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100
Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.00
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 11.15 Tolerance mm : + 0.05
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 11.15 Tolerance mm : + 0.05
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 11.15 Tolerance mm : + 0.05
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700 Del. quantity	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 11.15 Tolerance mm : + 0.05
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700	control lever position degree : 68.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 8.00 TORQUE CONTROL

		+ cm3/1000 strokes : +- 1.0
•		
ANEROID/ALTITUDE		+ cm3/1000s. : +- 3.0
COMPENSATOR TEST		+ Spreed
		+ cm3/1000 strokes : 3.5
		+ Check tolerance
SETTING		+ cm3/1000s. : 8.0
06112140		1 (1157 10000)
Rated speed rpm	: 500	
Pressure hPa		BREAKAWAY
rack travel mm	: 11.15	TORCANAMAI
Tolerance mm		T
loterance ima	: +- 0.00	T pool to be an a 10 10
445 4 C: 10 54454 FT		+ Rack travel in mm: 10.10
MEASUREMENT		Rated speed rpm : 1365
		+ Tolerance 1/min : + 5
Pressure hPa	:	†
Rated speed rpm	: 500	†
		+
Rated speed rpm	: 500	+ STARTING FUEL DELIVERY
•		+
Pressure hPa	: 300	Rated speed rpm : 100
rack travel mm	: 0.40	+ rack travel mm : 13.70
Tolerance mm		+ Tolerance mm : + 0.10
501 61100 11811	. 0.10	Del. quantity
Pressure hPa	: 450	+ cm3/1000 strokes : 84.0
	: 1.05	+ cm3/1000 strokes : +- 7.5
rack travel mm		+ Check tolerance
Tolerance mm	: +- 0.05	
		+ cm3/1000s. : $+$ 10.0
		 +
START CUT-OUT		†
		+
Rated speed rpm	: > 100	+
Rated speed rpm		→ LOW IDLE
,		}
Check		Rated speed rpm : 300
speed 1/min	· > 80	+ Del. quantity
Check	00	+ cm3/1000 strokes : 11.0
speed 1/min	: < 240	+ cm3/1000 strokes : + 2.0
speed minn	. \ 240	· · · · · · · · · · · · · · · · · · ·
		+ Check tolerance
FI.E. S.D. 21.E	0.4.07000000000000000000000000000000000	
FUEL DELIVERY CHA	ARACTERISTICS	+ Spreed
		- cm3/1000 strokes : 5.5
Aneroid pressure		+ Check tolerance
hPa	: 700	+ cm3/1000s. : 9.0
Rated speed rpm	: 700	+
Del. quantity		+
cm3/1000 strokes	: 87.5	+
cm3/1000 strokes		1
Check tolerance		
cm3/1000s.	: +- 4.0	1
	4.0	End of test specification sheet
Spreed	. 50	T cha of test specification sheet
cm3/1000 strokes	: 5.0	†
Check tolerance	2.2	†
cm3/1000s.	: 8.0	†
		†
Aneroid pressure		+
hPa	: -	+
Rated speed rpm	: 500	+
Del. quantity	. 	↓
cm3/1000 strokes	: 60.5	1
5110/ 1000 3110/C2		ı

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.04.96 : ISO 4113

Combination No. : 9 400 085 316

Injection pump

Pump designation : PES6A95D41ORS2795 EP type number : 9 400 084 020

Governor

Governer design. : RQV300...1400AB1065

: -18L

Governer no.

: 9 420 080 278

Cust. part No. :

Customer-spec. information Customer : MBB

: OM 366 Motor : 100.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

: + 2.0 Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25 : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 9.95 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 69.5

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 8.0

Dotad opend and	700 I	Chark talamana	
Rated speed rpm :	300 <u>T</u>	Check tolerance cm3/1000s.	: +- 3.0
	Ţ	Spreed	5.0
Dool, Amount do on .	7.00	cm3/1000 strokes	. 76
Rack travel in mm:			
Tolerance mm : +	- 0.10 +	Check tolerance	
Del. quantity	. †	cm3/1000s.	: 8.0
cm3/1000 strokes :			
cm3/1000 strokes : +	- 2.0 +		
Check tolerance	+		
Check tolerance cm3/1000s. : +	- 4.5	CONTROL LEVER	
Spreed	+		
cm3/1000 strokes :	5.5	control lever	
Check tolerance	1	position degree	: 62.0
cm3/1000s. :	9.0	tolerance degree	
	1	total dilica degli ca	
	1	control lever	
(D) SETTING OF THISCT	TON DUMP		. 110.0
(B) SETTING OF INJECT	TON LOUIL +	position degree	
WITH GOVERNOR	†	tolerance degree	 4.0
	†	*	
		RATED SPEED	
GUIDE SLEEVE TRAVEL	+		
	+	rack travel mm	: 8.90
Rated speed rpm :	1500	Rated speed rpm	: 1465
	1	Tolerance 1/min	: ← 5
guide steeve travel mm :	8.55		
Tolerance mm : +	- 0.05	rack travel mm	: 4.00
TOCCI di ICC IMII	1	Rated speed rpm	
Batad speed pps	750		
Rated speed rpm :	750	Tolerance 1/min	·
guide sleeve	, <u>, , , , , , , , , , , , , , , , , , </u>		. 0.50
travel mm :	4.20	rack travel mm	: 0.50
Tolerance mm : +	- 0.10	Tolerance mm	
	+	Rated speed rpm	: 1680
Rated speed rpm :	300		
guide sleeve	+		
	1.05		
Tolerance mm : +	- 0.25	LOW IDLE	
TOCCI GITICO IIII	1	204 1022	
Rated speed rpm :	500		
	700	control lever	
guide sleeve	3 FF T		. 70.0
travel mm :	2.55	position degree	
Tolerance mm : +-	~ U.2> †	tolerance degree	:
	+		
	+	control lever	
SUIDE SLEEVE POSITION	+	position degree	: 21.0
	+	tolerance degree	: + 4.0
Rated speed rpm :	1500	•	
·	1	Testing:	
Rack travel in mm :	16,50		
Tolerance mm : +		Rated speed rom	• 300
Occionice min	T	Rated speed rpm rack travel mm Tolerance mm	. 700
	T	Tolonomas	· 1.70
	5000 0700	roterance mm	; 0.10
FULL LOAD DELIVERY AT	FULL LUAD STOP	n. a. d	400
	†	Rated speed rpm	: 100
Rated speed rpm :	1400 +		
Aneroid pressure	+	CRT mm min.	: > 8.00
	- +		
nPa :	•		
	+	Rated speed rom	: 555
Del. quantity	69.5	Rated speed rpm	: 555
hPa : Del. quantity cm3/1000 strokes : cm3/1000 strokes : +-		Rated speed rpm	: 555

Rated speed rpm rack travel mm Tolerance mm	: 1400 : 9.95 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 9.95 : ← 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 250
Check speed 1/min	: > 80
Check speed 1/min	: < 270
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. BREAKAWAY Rack travel in mm Rated speed rpm Tolerance 1/min	: +- 2.0 : +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 14.10 : + 0.10 : 84.0 : + 7.5 : + 10.0
LOW IDLE	
Rated speed rpm	: 300

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Del. quantity
cm3/1000 strokes : 11.0
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
cm3/1000 strokes : 5.5
Check tolerance
cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09,04,96 Edition : ISO 4113 Test oil

Combination No. : 9 400 085 327

Injection pump

Pump designation : PES6A95D41ORS2772 EP type number : 9 400 084 018

Governor

Governer design. : RSV350...1250A0C1150

: -4L

: 9 420 083 256 Governer no.

Cust. part No. :

Customer-spec. information Customer : M88 : OM 366 A Motor : 121.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar : +- 1.5 Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : +- 0.05 Tolerance mm Check : +- 0.10 tolerance mm

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 9.65 Tolerance mm : \leftarrow 0.05

Del, quantity cm3/1000 strokes : 82.0

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: +- 3.0

Spreed

3.5 cm3/1000 strokes :

Check tolerance 8.0

cm3/1000s.

Rated speed rpm : 350	+ Tolerance 1/min : + 5
Rack travel in mm : 6.80 Tolerance mm : +- 0.10 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1340 Tolerance 1/min : +- 15
cm3/1000 strokes : 15.0 cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed	rack travel mm : 1.00 Tolerance mm : - 0.70 Rated speed rpm : 1500
cm3/1000 strokes : 5.5 Check tolerance cm3/1000S. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 75.0 tolerance degree : + 4.0 Setting point w/out bumper spr
GUIDE SLEEVE POSITION	+ Rated speed rpm : 350 + rack travel mm : 6.30
Rated speed rpm : 800	Testing:
Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	+ Rated speed rpm : 350 + rack travel mm : 6.80 + Tolerance mm : + 0.10
pre-tension click setting x : 3.25	+ rack travel mm : 2.00 + Rated speed rpm : 450 + Tolerance 1/min : + 30
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1250 Aneroid pressure hPa : -	CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes : 82.0 cm3/1000 strokes : +- 1.0	TORQUE CONTROL
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5	Rated speed rpm : 1250 rack travel mm : 9.65 Tolerance mm : + 0.05
Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 800 rack travel mm : 9.65 Tolerance mm : + 0.05
CONTROL LEVER	Rated speed rpm : 500 rack travel mm : 9.70 Tolerance mm : + 0.10
control lever position degree : 103.0 tolerance degree : +- 4.0	Rated speed rpm : 400 rack travel mm : 11.10 Tolerance mm : + 0.30
RATED SPEED	‡
rack travel mm : 8.60 Rated speed rpm : 1295	‡

rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1340 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 1.00 : - 0.70 : 1500
LOW IDLE	
control lever position degree tolerance degree	
Setting point w/o	out bumper spring
Rated speed rpm rack travel mm	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.80 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 450 : ← 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 9.65 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 9.65 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 9.70 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 400 : 11.10 : +- 0.30

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Rated speed rpm : 800 Del. quantity

74.0 cm3/1000 strokes : cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 8.60 Rated speed rpm : 1295
Tolerance 1/min : +

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.00 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 105.0 cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : **←** 13.0

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 15.0 cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

cm3/1000 strokes : 5.5

Check tolerance

9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 23.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 333

Injection pump

Pump designation : PES4A95D410RS2805 EP type number : 9 400 084 026

Governor

Governer design. : RQV300...1400AB1065

: -21L

Governer no. : 9 420 080 303

Cust. part No. :

Customer—spec. information Customer : MBB Motor : OM 364 Power KW : 66.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.75

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 69.0

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : + 3.0

Spreed cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 8.0

Rated speed rpm : 300

+	cm3/1000 strokes : 3.5
Rack travel in mm: 7.50	Check tolerance
Tolerance mm : + 0.10	cm3/1000s. : 8.0
Del. quantity + cm3/1000 strokes : 8.0 +	
cm3/1000 strokes : +- 2.0 +	
Check tolerance	CONTROL LEVER
Check tolerance cm3/1000s. : +- 4.5	
Spreed +	control lever
cm3/1000 strokes : 5.5	position degree : 62.0
Check tolerance cm3/1000s. : 9.0	tolerance degree : +- 4.0
	control lever
+	position degree : 111.0
(B) SETTING OF INJECTION PUMP	tolerance degree : +- 4.0
WITH GOVERNOR +	DATES ORIES
	RATED SPEED
GUIDE SLEEVE TRAVEL	rack travel mm : 8.70
-	rack travel mm : 8.70 Rated speed rpm : 1465
Rated speed rpm : 1500	Tolerance 1/min : +- 5
guide steeve	
travel mm : 8.55	rack travel mm : 4.00
Tolerance mm : + 0.05	Rated speed rpm : 1555 Tolerance 1/min : +- 15
Rated speed rpm : 750	Total ance Trimiti . +- ()
guide sleeve	rack travel mm : 0.50
travel mm : 4.20 +	Tolerance mm : + 0.50
Tolerance mm : + 0.10	Rated speed rpm : 1680
Poted aread pure . 300	
Rated speed rpm : 300 + guide sleeve +	
travel mm : 1.05	LOW IDLE
Tolerance mm : + 0.25	
- · · · · · · · · · · · · · · · · · · ·	
Rated speed rpm : 500	control lever position degree : 69.0
guide sleeve + travel mm : 2.55 +	tolerance degree : +- 4.0
Tolerance mm : + 0.25	to to tarrot dogrees to the
+	control lever
	position degree : 20.0
GUIDE SLEEVE POSITION +	tolerance degree : +- 4.0
Rated speed rpm : 1500	Testing:
Rack travel in mm: 16.50	Rated speed rpm : 300
Tolerance mm : + 1.30	rack travel mm : 7.50
+	rack travel mm : 7.50 Tolerance mm : + 0.10
THE PART OF THE PA	Data dansa dan a
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1400	CRT mm min. :> 7.50
Aneroid pressure	
hPa : - +	Rated speed rpm : 555
Del. quantity	
cm3/1000 strokes : 69.0 + cm3/1000 strokes : +- 1.0 +	TORQUE CONTROL
Check tolerance	TOTAGE CONTROL
cm3/1000s. : + 3.0 +	Rated speed rpm : 1400
Spreed	rack travel mm : 9.75
•	

Tolerance mm	: +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 9.75 : +- 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 250
Check speed 1/min Check	: > 80
	: < 270
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 8.70 : 1465 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes check tolerance	: 100 : 13.90 : + 0.10 : 84.0 : + 7.5
cm3/1000s. 	: +- 10.0
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes	: 300 : 8.0 : ← 2.0

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Check tolerance cm3/1000s. : +- 4.5 Spreed cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.09.96 : ISO 4113

Combination No. : 9 400 085 336

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RQV350...1400AB1261L

Governer no. : 9 420 080 307

Cust. part No. : 9.0520.05.6.9502

Customer—spec. information

Customer : MWM

: D 610 / X-10 Motor

Power KW

: 110.7

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

: +- 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.80 : ← 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Beginning of delivery differende

and maximum rack

: 10.50 travel Tolerance mm Tolerance mm : + 1.50 Difference ° CS : 2.00

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.75 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 71.0

cm3/1000 strokes : +- 1.0

Check tolerance : +- 3.0 cm3/1000s.

	 +	Tolerance mm	: + 1.30
Spreed cm3/1000 strokes	: 3.5	FILL LOAD DELTVE	RY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: 8.0	Rated speed rpm	
Rated speed rpm	: 350	Aneroid pressure hPa Del. quantity	: -
Rack travel in mm Tolerance mm	: 5.50 : +- 0.10	cm3/1000 strokes cm3/1000 strokes Check tolerance	: +- 1.0
Del. quantity cm3/1000 strokes cm3/1000 strokes		cm3/1000s. Spreed cm3/1000 strokes	
Check tolerance cm3/1000S. Spreed	: +- 4.5	Check tolerance cm3/1000s.	: 8.0
cm3/1000 strokes Check tolerance	+		
cm3/1000s.	9.0	CONTROL LEVER	
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	position degree tolerance degree	
GUIDE SLEEVE TRAVE	+	control lever position degree tolerance degree	
Rated speed rpm guide sleeve travel mm	: 1350 : 7.20	RATED SPEED	
Tolerance mm	: + 0.10	rack travel mm Rated speed rpm	
Rated speed rpm guide sleeve travel mm	: 800 + : 3.95	Tolerance 1/min rack travel mm	: +- 5 : 4.00
Tolerance mm Rated speed rpm	: + 0.25 : 300	Rated speed rpm Tolerance 1/min	: 1540 : +- 15
guide sleeve travel mm	: 1.05 : + 0.25	rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
Rated speed rpm guide sleeve	: 550		
travel mm	: 2.75 : + 0.25	LOW IDLE	
Rated speed rpm guide sleeve	: 1500	control lever position degree	
travel mm Tolerance mm	: 8.55 : + 0.25	tolerance degree	: +- 4.0
GUIDE SLEEVE POSIT	ION	position degree tolerance degree	
Rated speed rpm	: 1490	Testing:	
Rack travel in mm	: 16.50 +	Rated speed rpm	: 350

rack travel mm Tolerance mm	: 5.50 : + 0.10
Rated speed rpm	: 100
CRT mm min.	: > 6.50
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1400 : 9.75 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 10.05 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 270
Check speed 1/min	: > 80
Check speed 1/min	
Sheen TAILITE	: < 290
FUEL DELIVERY CHA	
FUEL DELIVERY CHA	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes	RACTERISTICS
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	RACTERISTICS : - : 700 : 62.5
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	RACTERISTICS : - : 700 : 62.5 : + 2.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	RACTERISTICS :
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	RACTERISTICS :

Del. quantity		
cm3/1000 strokes	:	72.0
cm3/1000 strokes Check tolerance	: +-	2.0
cm3/1000s. Spreed	: +-	4.0
cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0
BREAKAWAY		

Rack travel in mm : 8.70
Rated speed rpm : 1445
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00

LOW IDLE

Rated speed rpm : 350
Del. quantity
cm3/1000 strokes : 11.5
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
cm3/1000 strokes : 5.5
Check tolerance
cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.04.96 : ISO 4113

Combination No. : 9 400 085 337

Injection pump

Pump designation : PES6A95D41ORS2812

EP type number : 9 400 084 028

Governor

Governer design. : RQV350...1300AB1260L

Governer no. : 9 420 080 306

Cust. part No. : 9.0520.05.6.9501

Customer-spec. information

Customer : MWM

Motor

: TD 610 / X-10

Power KW

: 143.9

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

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x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm : 2.80 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50
Difference * CS : 2.00

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 12.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 94.5

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: +- 3.0

 †	Tolerance mm : + 1.30
Spreed cm3/1000 strokes : 3.5	
Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 8.0	Rated speed rpm : 1300 Aneroid pressure
Rated speed rpm : 350	hPa : 800 Del. quantity
\downarrow	cm3/1000 strokes : 94.5
Rack travel in mm: 5.50	cm3/1000 strokes : +- 1.0
Tolerance mm : + 0.10 + Del. quantity +	Check tolerance cm3/1000s. : +- 3.0
cm3/1000 strokes : 10.5	Spreed
cm3/1000 strokes : \leftarrow 2.0	cm3/1000 strokes : 3.5
Check tolerance +	Check tolerance
cm3/1000s. : +- 4.5 +- 5	cm3/1000s. : 8.0
cm3/1000 strokes : 5.5 Check tolerance	
cm3/1000s. : 9.0	CONTROL LEVER
Į	control lever
(B) SETTING OF INJECTION PUMP	position degree : 56.0
WITH GOVERNOR	tolerance degree : +- 4.0
	control lever
GUIDE SLEEVE TRAVEL	position degree : 111.0
Rated speed rpm : 1350	tolerance degree : +- 4.0
guide sleeve +	RATED SPEED
travel mm : 7.20	
Tolerance mm : + 0.10	rack travel mm : 11.00 Rated speed rpm : 1345
Rated speed rpm : 800	Tolerance 1/min : + 5
guide sleeve +	
travel mm : 3.95	rack travel mm : 4.00 Rated speed rpm : 1505
Tolerance mm : +- 0.25	Tolerance 1/min : +- 15
Rated speed rpm : 300	
guide sleeve	rack travel mm : 0.50
travel mm : 1.05 + Tolerance mm : + 0.25 +	Tolerance mm : + 0.50 Rated speed rpm : 1650
Total direct likil	Nated Speed (pin : 1050
Rated speed rpm : 550	
guide sleeve + travel mm : 2.75 +	LOW IDLE
Tolerance mm : + 0.25	LOW IDEE
Rated speed rpm : 1500 +	control lever
guide sleeve	position degree : 67.0
travel mm : 8.55 +	tolerance degree : +- 4.0
Tolerance mm : +- 0.25	control lever
	position degree : 12.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0
Rated speed rpm : 1490	Testing:
Rack travel in mm : 16.50	Rated speed rpm : 350

rack travel mm Tolerance mm	: 5.50 - : + 0.10 -	-
Rated speed rpm	: 100	-
CRT mm min.	: > 6.50	-
Rated speed rpm	: 425	
TORQUE CONTROL		L
Rated speed rpm rack travel mm Tolerance mm	: 1300 - : 12.05 : +- 0.05	
Rated speed rpm rack travel mm Tolerance mm		- -
Rated speed rpm rack travel mm Tolerance mm	: 12.35	-
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 12.05 : +- 0.05	- - - -
ANEROID/ALTITUDE COMPENSATOR TEST		- - -
SETTING	+	-
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 800 : 12.35 : + 0.05	- - -
MEASUREMENT	†	- - -
Pressure hPa Rated speed rpm	: - : 500	- -
Rated speed rpm	: 500	-
Pressure hPa rack travel mm Tolerance mm	: 190 : 0.45 : +- 0.05	- - -
Pressure hPa rack travel mm Tolerance mm	: 460 : 1.55 : ← 0.15	- !
START CUT-OUT		- (
Rated speed rpm Rated speed rpm	: > 100 : < 270	· (

Check	> 80 < 290
FUEL DELIVERY CHARA	CTERISTICS
Aneroid pressure hPa : Rated speed rpm : Del. quantity cm3/1000 strokes : cm3/1000 strokes : Check tolerance cm3/1000s. :	800 800 95.5 + 2.0 + 4.0
Aneroid pressure hPa : Rated speed rpm : Del. quantity cm3/1000 strokes : cm3/1000 strokes : Check tolerance cm3/1000s. :	500 59.5 +- 1.0 +- 3.0
BREAKAWAY	
Rack travel in mm : Rated speed rpm : Tolerance 1/min :	1345
STARTING FUEL DELIV	ERY
Rated speed rpm : rack travel mm : Tolerance mm :	100 20.00 +- 1.00
LOW IDLE	
Rated speed rpm : Del. quantity cm3/1000 strokes : cm3/1000 strokes : Check tolerance cm3/1000S. : Spreed cm3/1000 strokes : Check tolerance cm3/1000S. :	350 10.5 +- 2.0 +- 4.5 5.5 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.05.96 Test oil : ISO 4113

Combination No. : 9 400 085 339

Injection pump

Pump designation : PES4A95D410RS2774 EP type number : 9 400 084 019

Governor

Governer design. : RQV300...1300AB1066

: -11L

: 9 420 080 309 Governer no.

Cust. part No. : 0200742602

Customer-spec. information

Customer : MBB

: OM 364 LA Motor

: 100.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.25 Tolerance mm : +- 0.05 Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.55 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 103.0

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000S. : +- 3.0

Spreed

cm3/1000 strokes : 3.5

Check tolerance 8.0 cm3/1000s.

300 Rated speed rpm :

	+ Del. quantity
Rack travel in mm : 7.00	+ cm3/1000 strokes : 103.0
Tolerance mm : + 0.10	+ cm3/1000 strokes : +- 1.0
Del. quantity	+ Check tolerance
cm3/1000 strokes : 9.5	+ cm3/1000s. : +- 3.0
cm3/1000 strokes : +- 2.0	+ Spreed
Check tolerance	+ cm3/1000 strokes : 3.5
cm3/1000s. : +- 4.5	+ Check tolerance
Spreed	+ cm3/1000s. : 8.0
cm3/1000 strokes : 5.5	
Check tolerance	}
cm3/1000s. : 9.0	
	1
(B) SETTING OF INJECTION PUMP	→ control lever
WITH GOVERNOR	position degree : 63.0
WZTIT GOVERNOR	tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL	control lever
COLUMN CO	position degree : 112.0
Rated speed rpm : 1350	tolerance degree : + 4.0
guide sleeve	4
travel mm : 8.20	RATED SPEED
Tolerance mm : +- 0.10	I WATER OF EED
Toterance limit . +- 0.10	rack travel mm : 10.50
Rated speed rpm : 1000	Rated speed rpm : 1360
the second of th	Tolerance 1/min : +- 5
guide sleeve travel mm : 5.75	T Toterance min : +- 3
	rack travel mm : 4.00
Tolerance mm : + 0.25	
200	
Rated speed rpm : 300	Tolerance 1/min : +- 15
guide sleeve	7
travel mm : 1.05	rack travel mm : 0.50
Tolerance mm : + 0.25	Tolerance mm : + 0.50
	+ Rated speed rpm : 1630
Rated speed rpm : 700	†
guide sleeve	†
travel mm : 4.25	
Tolerance mm : + 0.25	+ LOW IDLE
	†
Rated speed rpm : 1450	†
guide sleeve	+ control lever
travel mm : 9.15	+ position degree : 68.0
Tolerance mm : + 0.25	tolerance degree : +- 4.0
	†
	- + control lever
GUIDE SLEEVE POSITION	† position degree : 20.0
	† tolerance degree : +- 4.0
Rated speed rpm : 1395	+
	† Testing:
Rack travel in mm : 16.50	+
Tolerance mm : +- 1.30	+ Rated speed rpm : 300
	+ rack travel mm : 7.00
	— → Tolerance mm : → 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	+
	+ Rated speed rpm : 100
Rated speed rpm : 1300	+
Aneroid pressure	+ CRT mm min. $:> 9.00$
hPa : 800	+
	Rated speed rpm : 525
	•

TORQUE CONTROL	
Rated speed rpm	: 1300
rack travel mm	: 11.55
Tolerance mm	: + 0.05
Rated speed rpm	: 700
rack travel mm	: 11.85
Tolerance mm	: + 0.05
Rated speed rpm	: 1100
rack travel mm	: 11.75
Tolerance mm	: + 0.05
Rated speed rpm	: 950
rack travel mm	: 11.85
Tolerance mm	: ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 800
rack travel mm	: 11.85
Tolerance mm	: + 0.05
MEASUREMENT	
Pressure hPa	: -
Rated speed rpm	: 500
Rated speed rpm	: 500
Pressure hPa	: 500
rack travel mm	: 1.45
Tolerance mm	: + 0.15
Pressure hPa	: 380
rack travel mm	: 0.40
Tolerance mm	: ← 0.10
START CUT-OUT	
Rated speed rpm	: > 100
Rated speed rpm	: < 250
Check speed 1/min Check	: > 80
speed 1/min	: < 270

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes cm3/1000 strokes check tolerance cm3/1000s.	: 800 : 700 : 97.5 : + 2.0 : + 4.0 : - 500 : 59.0 : + 1.0 : + 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1360
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 13.40 : + 0.10 : 86.0 : + 7.5 : + 10.0
LOW IDLE	
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: 300 : 9.5 : +- 2.0 : +- 4.5 : 5.5 : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.04.96 : ISO 4113

Combination No. : 9 400 085 340

Injection pump

Pump designation : PES6A95D41ORS2795

EP type number : 9 400 084 020

Governor

Governer design. : RSV350...1250A0C1150

: -5L

Governer no.

: 9 420 083 258

Cust. part No. :

Customer-spec. information Customer : MBB

: OM 366 Motor Power KW : 94.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

: +- 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar : + 1.5 Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

REMARKS

x length mm :

x inside diameter: 3.0

600

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 8.65 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 63.5

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. 8.0

Rated speed rpm : 350	+ Tolerance 1/min : +- 5
Nated speed rpm . 330	+ Toterance Timin . +- 3
	+ rack travel mm : 4.00
Rack travel in mm : 7.00	Rated speed rpm : 1347
	+ Tolerance 1/min : +- 15
Del. quantity	†
cm3/1000 strokes : 12.0	+ rack travel mm : 0.85
cm3/1000 strokes : +- 2.0	+ Tolerance mm : ~ 0.55
Check tolerance	Rated speed rpm : 1500
cm3/1000s. : +- 4.5	1
Spreed	
	T
cm3/1000 strokes : 5.5	
Check tolerance	+ LOW IDLE
cm3/1000s. : 9.0	+
	+
	∔ control lever
(B) SETTING OF INJECTION PUMP	position degree : 82.0
WITH GOVERNOR	tolerance degree : +- 4.0
MILL GOVERNOR	toterance degree : +- 4.0
	<u> </u>
	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 350
GOINE SPECKE LOSTITOM	+ rack travel mm : 6.50
200	+ rack travel mm : 0.50
Rated speed rpm : 800	† .
	+ Testing:
Rack travel in mm : 0.65	+
Tolerance mm : + 0.35	+ Rated speed rpm : 350
1 Oct all loc likil	+ rack travel mm : 7.00
	+ Tolerance mm : + 0.10
governor spring	T Toterance in . T 0.10
pre-tension	†
click setting $x : 5.00$	+ rack travel mm : 2.00
	+ Rated speed rpm : 475
<u></u>	+ Tolerance 1/min : + 30
FULL LOAD DELIVERY AT FULL LOAD STOP	1
TOLL COND DECIVER AT TOLL COND OTHER	Rated speed rpm : 100
Data diamental number 1250	T Mateu speed (piii : 100
Rated speed rpm : 1250	1 200
Aneroid pressure	+ CRT mm min. : > 19.00
hPa : -	+
Del. quantity	<u> </u>
cm3/1000 strokes : 63.5	TORQUE CONTROL
cm3/1000 strokes : + 1.0	1
	I Pated speed rom . 1250
Check tolerance	Rated speed rpm : 1250
Check tolerance cm3/1000s. : +- 3.0	rack travel mm : 8.65
Check tolerance cm3/1000s. : +- 3.0 Spreed	
Check tolerance cm3/1000s. : +- 3.0	rack travel mm : 8.65 Tolerance mm : + 0.05
Check tolerance cm3/1000s. : +- 3.0 Spreed	rack travel mm : 8.65
Check tolerance cm3/1000s. : +- 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500
Check tolerance cm3/1000s. : +- 3.0 Spreed cm3/1000 strokes : 3.5	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70
Check tolerance cm3/1000s. : +- 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500
Check tolerance cm3/1000s. : +- 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400
Check tolerance cm3/1000s. : +- 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 110.0	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 110.0 tolerance degree : + 4.0	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 110.0	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 110.0 tolerance degree : + 4.0 RATED SPEED	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10 Tolerance mm : + 0.30
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 110.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 7.60	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10
Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 110.0 tolerance degree : + 4.0 RATED SPEED	rack travel mm : 8.65 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10 Rated speed rpm : 400 rack travel mm : 10.10 Tolerance mm : + 0.30

Rack travel in mm : 7.60
Rated speed rpm : 1295
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.20 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 101.5 cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 350
Del. quantity
cm3/1000 strokes : 12.0
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
cm3/1000 strokes : 5.5
Check tolerance
cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 341

Injection pump

Pump designation : PES4A95D410RS2805 EP type number : 9 400 084 026

Governor

Governer design. : RSV350...1300A0c1150

: -6L

Governer no. : 9 420 083 257

Cust. part No. :

Customer-spec. information

Customer : MBB : OM 364 Motor Power KW : 60.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.25 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 9.45 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 59.5

cm3/1000 strokes : + 1.0

Check tolerance

: +- 3.0 cm3/1000s.

Spreed

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 8.0

Rated speed rpm : 350

· 1	rack travel mm : 4.00
Rack travel in mm: 7.50	Rated speed rpm : 1405
Tolerance mm : +- 0.10	Tolerance 1/min : +- 15
Del. quantity +	
cm3/1000 strokes : 9.0 +	rack travel mm : 0.85
cm3/1070 strokes : +- 2.0 +	Tolerance mm : + 0.55
Check tolerance + 4.5 + 4.5	Rated speed rpm : 1550
Spreed + 4.5	
cm3/1000 strokes : 5.5	
Check tolerance +	LOW IDLE
cm3/1000s. : 9.0 +	
†	
(D) OFTING OF THIS CTION DUMP	control lever
(B) SETTING OF INJECTION PUMP + WITH GOVERNOR +	position degree : 82.0 tolerance degree : +- 4.0
WITH GOVERNOR I	toterance degree : +- 4.0
1	Setting point w/out bumper spring
GUIDE SLEEVE POSITION +	Rated speed rpm : 350
+	rack travel mm : 7.00
Rated speed rpm : 800	Tankin
Rack travel in mm: 0.65	Testing:
Tolerance mm : +- 0.35	Rated speed rpm : 350
Total anioc light	rack travel mm : 7.50
governor spring +	Tolerance mm : \leftarrow 0.10
pre-tension +	
click setting x : 4.75	rack travel mm : 2.00
†	Rated speed rpm : 500 Tolerance 1/min : +- 30
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : +- 30
FOLE LOAD DELIVERY AT FOLE LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1300	(Massa sposa (pm)
Aneroid pressure +	CRT mm min. : > 19.00
hPa : - +	
Del. quantity +	TARAME CONTROL
cm3/1000 strokes : 59.5 + cm3/1000 strokes : + 1.0 +	TORQUE CONTROL
cm3/1000 strokes : + 1.0 + Check tolerance +	Rated speed rpm : 1300
cm3/1000s. : + 3.0 +	rack travel mm : 9.45
Spreed +	Tolerance mm : + 0.05
cm3/1000 strokes : 3.5	
Check tolerance	Rated speed rpm : 500
cm3/1000s. : 8.0	rack travel mm : 9.50 Tolerance mm : + 0.10
Ĭ	roterance mm : +- 0.10
	Rated speed rpm : 400
CONTROL LEVER +	rack travel mm : 10.90 Tolerance mm : + 0.30
+	Tolerance mm : +- 0.30
control lever +	
position degree : 111.0 +	
tolerance degree : + 4.0	
RATED SPEED	
T T	
rack travel mm : 8.40	BREAKAWAY
Rated speed rpm : 1345	
Tolerance 1/min : + 5	0.40
+	Rack travel in mm : 8.40

Rated speed rpm : 1345
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.90 Tolerance mm : +-- 0.10 Del. quantity

cm3/1000 strokes : 94.0 cm3/1000 strokes : + 7.5

Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 9.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed cm3/1000 strokes : 5.5 Check tolerance 9.0 cm3/1000s.

Note remarks

Refer to Service Info for that and adjustment instructions. See microcard(s) W400/...

Edition : 10.09.96 Test oil : ISO 4113

Combination No. : 9 400 08" 344

Injection pump

Pump designation : Pt.35/95D410RS2772

EP type number : 9 400 084 018

Governor

Governer design. : RSV350...900A7C2076L

Governer no. : 9 420 083 251

Cust. part No. :

Customer-spec. information

Customer : MBB

Motor

: 0M 366A : 107.3 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40

Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar

Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : + 1.0

Prestroke mm : 3.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 860

Rack travel in mm : 10.45 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 86.5

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 8.0

F04

Rated speed rpm	: 350	† ra	ick travel mm	: 9.40
		→ Ra	ted speed rpm	: 934
Rack travel in mm	: 6.00		lerance 1/min	
Tolerance mm			ick travel mm	
Del. quantity	0.10	1 '	CK CI GVCC IIIII	• 4.00
cm3/1000 strokes	. 70	I	ck travel mm	. 0.85
cm3/1000 strokes cm3/1000 strokes			lerance mm	: 0.85 : - 0.55
Charles to large	: +- 2.0	7 10	terance mm	3400
Check tolerance cm3/1000s.		† Ra	ted speed rpm	: 1100
cm3/1000S.	: +- 4.5	† _		001
Porced			ted speed rpm	: 906
ce3/1000 strokes	5.5	+ ra	ck travel mm	:
Check tolerance		+ _		
cm dens.	: 9.0		ted speed rpm	
			lerance 1/min	
		† ra	ick travel mm	: 4.00
(B) SETTING OF IN	BECTION PURP	+		
WITH GOVERNOR		+ ra	ick travel mm	
		∔ To	lerance mm	: ← 0.55
		→ Ra	ted speed rpm	
		1		
GUIDE SLEEVE POST	TICN	∔ Ra	tuc aproed mom	: 907
			ck travel am	
Rated speed rpm	: 80C	1	OIL GI GIO C. IIII	,
nated speed ipin	. 000	l Pa	ted speed rpm	: 9აგ
Dook tookal to me	. 0.50		lerance 1/min	
Rack travel in mm				
Tolerance mm	: +- 0.20	† ra	ck travel mm	: 4.00
		T	ali Amariat am	. 0.05
governor spring			ck travel mm	
pre-tension	P 74		Lecarce mm	
click setting x	: 5.75	† Ra	tes speed rpm	: 1100
		† .		
	· · · · · · · · · · · · · · · · · · ·	+ Ra	ted speed rpm	: 908
FULL LOAD DELIVER	AT FULL LOAD STOP	+ ra	ck travel mm	: 9.40
		+		
Rated speed rpm	: 860		ted speed rpm	
Aneroid pressure			lerance 1/min	
hPa	: -	+ ra	ck travel mm	: 4.00
Del. quantity		+		
cm3/1000 strokes	: 86.5	+ ra	ck travel mm	: 0.85
cm3/1000 strokes	: ← 1.0	+ To	lerance mm	: +- 0.55
Check tolerance		+ Ra	ted speed rpm	: 1100
cm3/1000s.	: 3.0	+		
Spreed		– ∔ ka	ted speed rpm	: 909
cm3/1000 strokes	: 3.5		ck travel mm	
Check tolerance		1		
cm3/1000s.	: 8.0	→ Ra	ted speed rpm	: 938
			lerance 1/min	
			ck travel mm	
		1	CK CI GVCC IMII	. 7.00
CONTROL LEVER		\perp	ck travel mm	: 0.85
CONTROL LEVER			lerance mm	
control lover			ted speed rpm	
control lever	: 108.0	I na	rea speed i hill	. ,,,,,,
position degree		I	ted speed rpm	: 910
tolerance degree	: +- 4.0			
		† ra	ck travel mm	: 9.40
100mm 11 04:	OFTTAIC	† _		. 070
ASSEMBLY GOVERNOR	SETTING		ted speed rpm	
			lerance 1/min	
Rated speed rpm	: 905	+ ra	ck travel mm	: 4.00
, ,				
F05				

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1100

LOW IDLE

control lever

position degree : 78.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 5.50

Testing:

Rated speed rpm : 350 rack travel mm : 6.00 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 400
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 860 rack travel mm : 10.45 Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm : 10.50 Tolerance mm : + 0.10

Rated speed rpm : 400 rack travel mm : 11.30 Tolerance mm : +-- 0.30

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.80 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 84.0 cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDEE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 7.0 cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.04.96 : ISO 4113

Combination No. : 9 400 035 346

Injection pump

Pump designation : PES4A95D410RS2805 EP type number : 9 400 084 026

Governor

Governer design. : RSV350...900A7c2076

: -2L

Governer no.

: 9 420 083 253

lust. part No. :

Customer-spec. information

Customer

: MBB

Motor Power KW : OM 364 46.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.1

Test oil inlet

temp. °C

40

Tolerance °C

: **←** 2.0

Overflow valve

: 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: **←** 1.5

Test lines

: 1 680 750 015

Outside diameter : 6.0

F07

x inside diameter : 3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.25 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm :

860

8.65 Rack travel in mm : Tolerance mm

Del. quantity

: +- 0.05

cm3/1000 strokes :

58.5

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: ← 3.0

Spreed

cm3/1000 strokes :

3.5

Check tolerance

cm3/1000s.

8.0

Rated speed rpm :

350

Rack travel in mm : 6.50 Tolerance mm : + 0.10 Del. quantity	Rated speed rpm : 935 Tolerance 1/min : + 4 rack travel mm : 4.00
cm3/1000 strokes : 7.5 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 4.5	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1100
Spreed cm3/1000 strokes : 5.5 Check tolerance	Rated speed rpm : 911 rack travel mm : 7.60
cm3/1000s. : 9.0	Rated speed rpm : 936 Tolerance 1/min : + 4 rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1100
GUIDE SLEEVE POSITION	Rated speed rpm : 912 rack travel mm : 7.60
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Rated speed rpm : 937 Tolerance 1/min : + 4 rack travel mm : 4.00
governor spring pre-tension click setting x : 6.75	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1100
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 913 rack travel mm : 7.60
Rated speed rpm : 860 Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 938 Tolerance 1/min : + 4 rack travel mm : 4.00
cm3/1000 strokes : 58.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1100
Spréed cm3/1000 strokes : 3.5	Rated speed rpm : 914 rack travel mm : 7.60
Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 939 Tolerance 1/min : +- 4 rack travel mm : 4.00
CONTROL LEVER	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1100
control lever position degree : 112.0 tolerance degree : +- 4.0	Rated speed rpm : 1100 Rated speed rpm : 915 rack travel mm : 7.60
ASSEMBLY GOVERNOR SETTING	Rated speed rpm : 940 Tolerance 1/min : +- 4
Rated speed rpm : 910 rack travel mm : 7.60	rack travel mm : 4.00 rack travel mm : 0.85

Tolerance mm : + 0.55 Rated speed rpm : 1100

LOW IDLE

control lever

position degree : 82.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 6.00

Testing:

Rated speed rpm : 350 rack travel mm : 6.50 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 410
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 860 : 8.65 : + 0.05 rack travel mm : Tolerance mm

Rated speed rpm : 500 rack travel mm : 8.70 rack travel mm : 8.70Tolerance mm : +-0.10

Rated speed rpm : 400 rack travel mm : 9.60 Tolerance mm : + 0.30

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 13.40
Tolerance mm : + 0.10
Del. quantity

Del. quantity

cm3/1000 strokes : 84.0 cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 7.5 cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 4.5 : +--

Spreed

cm3/1000 strokes : 5.5

Check tolerance

: 9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 348

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RSV350...900A7C805L

Governer no. : 9 420 083 263

Cust. part No. : 9.0520.05.6.9504

Customer-spec. information

Customer : MWM

: 6.10 TCA Motor 154.5

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance *C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

: 173.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 2.80
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

travel

: 10.50

Tolerance mm : + 1.50

Difference * CS : 2.00

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm: 13.95

Tolerance \approx : + 0.05

Del. quantity

cm3/1000 strokes : 137.5

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

F10

Spreed cm3/1000 strokes : 3.5	‡ ‡	control lever position degree tolerance degree	
Check tolerance cm3/1000s. : 8.0	‡	ASSEMBLY GOVERNOR	R SETTING
Rated speed rpm : 350	‡	Rated speed rpm rack travel mm	: 900 : 13.00
Rack travel in mm : 5.50 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 17.5	† †	Rated speed rpm Tolerance 1/min rack travel mm	
cm3/1000 strokes : +- 2.0 Check tolerance	‡	rack travel mm	: 0.85
cm3/1000s. : +- 4.5 Spreed	+	Tolerance mm Rated speed rpm	: + 0.55 : 1100
cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0	1	Rated speed rpm rack travel mm	: 901 : 13.00
Clip37 10005 9.0	Ī	Rated speed rpm	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+	Tolerance 1/min rack travel mm	
		rack travel mm Tolerance mm	: 0.85 : + 0.55
GUIDE SLEEVE POSITION	<u> </u>	Rated speed rpm	
Rated speed rpm : 800	+	Rated speed rpm rack travel mm	
Rack travel in mm: 0.65 Tolerance mm: +- 0.35 governor spring	+	Rated speed rpm Tolerance 1/min rack travel mm	: 947 : + 4 : 4.00
pre-tension click setting x : 5.20	 + +	rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1100
FULL LOAD DELIVERY AT FULL LOAD	STOP		: 903
Rated speed rpm : 850 Aneroid pressure	Ī	Rated speed rpm rack travel mm	: 13.00
hPa : - Del. quantity cm3/1000 strokes : 137.5 cm3/1000 strokes : + 1.0	+	Rated speed rpm Tolerance 1/min rack travel mm	: 948 : + 4 : 4.00
Check tolerance cm3/1000s. : +- 3.0 Spreed	<u> </u>	rack travel mm Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 1100
cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	†	Rated speed rpm rack travel mm	: 904 : 13.00
CONTROL LEVER	 	Rated speed rpm Tolerance 1/min rack travel mm	: 949 : +- 4 : 4.00
	‡	rack travel mm	: 0.85

Tolerance mm : \leftarrow 0.55 Rated speed rpm : 1100 Rated speed rpm : 905

Rated speed rpm : 905 rack travel mm : 13.00

Rated speed rpm : 950
Tolerance 1/min : +- 4
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1100

LOW IDLE

control lever

position degree : 75.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 5.00

Testing:

Rated speed rpm : 350 rack travel mm : 5.50 Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 395
Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 850 rack travel mm : 13.95 Tolerance mm : + 0.05

Rated speed rpm : 550 rack travel mm : 14.00 Tolerance mm : +- 0.10

Rated speed rpm : 400 rack travel mm : 15.50 Tolerance mm : \div 0.30

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : : - 1.00

LOW IDLE

Rated speed rpm : 350

Del. quantity
cm3/1000 strokes : 17.5
cm3/1000 strokes : + 2.0

Check tolerance
cm3/1000s. : + 4.5

Spreed
cm3/1000 strokes : 5.5

Check tolerance
cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.09.96 Test oil : ISO 4113

Combination No. : 9 400 085 349

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RQV350...1250AB1260

: -1L

Governer no. : 9 420 080 330

Cust. part No. : 9.0520.05.6.9504

Customer—spec. information Customer : MWM Motor : 6.10 T

Power KW : 129.5

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.80 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50
Difference ° CS : 2.00

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.75 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 92.5

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : + 3.0

+	Tolerance mm : + 1.30
Spreed cm3/1000 strokes : 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 1250
Rated speed rpm : 350	Aneroid pressure hPa : 800 Del. quantity
Rack travel in mm: 5.20 Tolerance mm: +- 0.10 Del. quantity	cm3/1000 strokes : 92.5 cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
<pre>cm3/1000 strokes : 9.5 cm3/1000 strokes : +- 2.0 Check tolerance</pre>	Spreed : 3.5 check tolerance
cm3/1000s. : +- 4.5 Spreed cm3/1000 strokes : 5.5	cm3/1000s. : 8.0
Check tolerance cm3/1000s. 9.0	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 54.0 tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL	control lever position degree : 110.0 tolerance degree : +- 4.0
Rated speed rpm : 1350 guide sleeve travel mm : 7.20	RATED SPEED
Tolerance mm : + 0.10 Rated speed rpm : 800	rack travel mm : 10.70 Rated speed rpm : 1305 Tolerance 1/min : +- 5
guide sleeve travel mm : 3.95 Tolerance mm : +- 0.25	rack travel mm : 4.00 Rated speed rpm : 1470 Tolerance 1/min : +- 15
Rated speed rpm : 300 guide sleeve travel mm : 1.05 Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Roted speed rpm : 1630
Rated speed rpm : 550	
guide sleeve travel mm : 2.75 Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 1500 guide sleeve	control lever position degree : 68.0
travel mm : 8.55 Tolerance mm : + 0.25	tolerance degree : +- 4.0 control lever
GUIDE SLEEVE POSITION	position degree : 12.0 tolerance degree : +- 4.0
Rated speed rpm : 1490	Testing:
Rack travel in mm: 16.50	Rated speed rpm : 350

rack travel mm	: 5.20	† Charle
olerance mm	; 0.10	+ Check
	400	+ speed 1/min : > 80
Rated speed rpm	: 100	+ Check
		+ speed 1/min : < 290
CRT mm min.	: > 7.00	+
		+
Rated speed rpm	: 400	→ FUEL DELIVERY CHARACTERISTICS
		+
	·····	Aneroid pressure
ORQUE CONTROL		hPa : 800 Rated speed rpm : 750
		Rated speed rom : 750
Rated speed rpm	1250	Del quantity
varen aheen ihii	• 11 75	Del. quantity + cm3/1000 strokes : 92.5
rack travel mm Tolerance mm		T UIID/1000 Strokes : 72.3
oterance mm	; - 0.05	+ cm3/1000 strokes : + 2.0
		theck tolerance cm3/1000s. : + 4.0
Rated speed rpm	: 750	+ cm3/1000s. : +- 4.0
rack travel mm Folerance mm	: 12.15	+ Spreed
Tolerance mm	: ← 0.05	+ cm3/1000 strokes : 5.0
	_ _ • • -	- Check tolerance
mnn heads hetes	• •00	Check tolerance cm3/1000s. : 8.0
veren sheen thu	, 700 , 12.15	T (1115) 10003 0.0
Rated speed rpm rack travel mm Folerance mm	• 16.13	T Amazadal amazanı
oterance mm	; 0.05	+ Aneroid pressure
	4	hPa : 800
Rated speed rpm rack travel mm Folerance mm	: 1050	Rated speed rpm : 900
ack travel mm	: 11.95	+ Del. quantity
olerance mm	: ← 0.05	- cm3/1000 strokes : 96.0
		+ cm3/1000 strokes : +- 2.0
<u></u>		Check tolerance
LICOATO (AL TITLIAC		
NEROID/ALTITUDE		† cm5/10003. : † 4.0
COMPENSATOR TEST		+ Spreed
		- cm3/1000 strokes : 5.0
		+ Check tolerance
SETTING		+ cm3/1000s. : 8.0
		+
mon beens betes	: 500	+ Aneroid pressure
Rated speed rpm Pressure hPa	. 200	hPa : -
ressure nra rack travel mm	. 12 15	Rated speed rpm : 500
Tolerance mm	: +- 0.05	+ Del. quantity
		+ cm3/1000 strokes : 73.0
MEASUREMENT		+ cm3/1000 strokes : $+$ 1.0
		+ Check tolerance
ressure hPa	: -	+ cm3/1000s. : + 3.0
lated speed rpm	: 500	Spreed
TOO SPOOM I WILL		- cm3/1000 strokes : 3.5
lated speed nom	: 500	Check tolerance
Rated speed rpm	. , , , , , , , , , , , , , , , , , , ,	
	. /00	+ cm3/1000s. : 8.0
ressure hPa	: 480	†
ack travel mm	: 0.70	+
olerance mm	: +- 0.10	+ BREAKAWAY
		+
ressure hPa	: 380	1
ack travel mm		A Rack travel in mm : 10.70
olerance mm	: +- 0.05	Rated speed rpm : 1305
oterance mm	, ייי	+ Tolerance 1/min : +- 5
		+ loterance l/min : +- 5
		+
TART CUT-OUT		†
ated speed rpm		+ STARTING FUEL DELIVERY
ated speed rpm	: < 270	+
•		•

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 9.5

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 352

Injection pump

Pump designation : PES6A95D410RS2795 EP type number : 9 400 084 020

Governor

Governer design. : RSV350...1050A0c1150

: -7L

Governer no. : 9 420 083 287

Cust. part No. :

Customer—spec. information Customer : MBB Motor : OM 366

Power KW : 70.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.25 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 7.85

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 48.5

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 8.0

F17

Rated speed rpm : 350
Rack travel in mm : 7.00 Tolerance mm : + 0.10 Del. quantity
cm3/1000 strokes : 13.0 cm3/1000 strokes : +- 2.0 Check tolerance
cm3/1000s. : +- 4.5
Spreed cm3/1000 strokes : 5.5
Check tolerance cm3/1000S. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR
GUIDE SLEEVE POSITION
Rated speed rpm : 800
Rack travel in mm : 0.65 Tolerance mm : +- 0.35
governor spring pre-tension
click setting x : 5.50
FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 1050
Rated speed rpm : 1050 Aneroid pressure hPa : -
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5 cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0
Rated speed rpm : 1050 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 48.5 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 105.0

Tolerance 1/min	: +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1145 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : - 0.55 : 1300
LOW IDLE	
control lever position degree tolerance degree	: 85.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm rack travel mm	: 350 : 6.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 7.00 : ← 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 585
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 7.85 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 9.25 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 8.20 : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa 600 Rated speed rpm Del. quantity cm3/1000 strokes : 54.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +- 4.0 Aneroid pressure hPa Rated speed rpm 900 Del. quantity cm3/1000 strokes : 53.5 cm3/1000 strokes 2.0 Check tolerance cm3/1000s. : +- 4.0 **BREAKAWAY** 6.80 Rack travel in mm : Rated speed rpm : 1095 Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 13.00 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 84.0 cm3/1000 strokes : +- 7.5Check tolerance cm3/1000s.: + 10.0LOW IDLE 350 Rated speed rpm : Del. quantity cm3/1000 strokes : 13.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed cm3/1000 strokes : 5.5 Check tolerance

9.0

End of test specification sheet

cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 356

Injection pump

Pump designation : PES6A85D41ORS2756 EP type number : 9 400 093 006

Governor

Governer design. : RSV325...1150A1C1165

: 1

Governer no. : 9 420 083 290

Cust. part No. :

Customer—spec. information
Customer : DEUTZ ARG.
Motor : BF6L913
Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 32.0 Tolerance bar : + 1.0

Prestroke mm : 1.95Tolerance mm : $\leftarrow 0.05$

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 11.35 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 73.0

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. : 7.0

F20

Rated speed rpm : 325	† Tolerance 1/min : +- 5
Rack travel in mm : 8.00 Tolerance mm : + 0.10 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : +- 15
<pre>cm3/1000 strokes : 11.0 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0</pre>	rack travel mm : 0.85 Tolerance mm : - 0.55 Rated speed rpm : 1380
Spreed cm3/1000 strokes : 4.5 Check tolerance	LOW IDLE
cm3/1000s. : 7.0	‡
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<pre>control lever position degree : 77.0 tolerance degree : +- 4.0</pre>
	+ Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 325 rack travel mm : 7.50
Rated speed rpm : 800	Testing:
Rack travel in mm : 0.65 Tolerance mm : +- 0.35	+ Rated speed rpm : 325 + rack travel mm : 8.00
governor spring pre-tension	Tolerance mm : + 0.10
click setting x : 5.00	+ rack travel mm : 2.00 + Rated speed rpm : 570 + Tolerance 1/min : +- 30
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 100
Rated speed rpm : 1150 Aneroid pressure hPa : -	CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes : 73.0	TORQUE CONTROL
cm3/1000 strokes : +- 0.5 Check tolerance cm3/1000s. : +- 2.5	Rated speed rpm : 1150 rack travel mm : 11.35
Spreed cm3/1000 strokes : 3.0	+ Tolerance mm : +- 0.05
Check tolerance cm3/1000s. : 7.0	Rated speed rpm : 500 rack travel mm : 13.05 Tolerance mm : +- 0.05
	Rated speed rpm : 800
CONTROL LEVER	+ rack travel mm : 12.35 + Tolerance mm : +- 0.15
control lever position degree : 114.0 tolerance degree : +- 4.0	‡
RATED SPEED	ELIEL DEL TUEDV CHADACTECTOTACO
rack travel mm : 10.30 Rated speed rpm : 1195	+ FUEL DELIVERY CHARACTERISTICS + +

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 79.5 : + 1.5 : + 3.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: - : 800 : 76.5 : + 1.5 : + 3.5
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.00 : + 1.00
LOW IDLE	
Rated speed rpm Del. quantity	: 325
cm3/1000 strokes	: 11.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 4.5
Check tolerance	: 7.0
cm3/1000s.	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 357

Injection pump

Pump designation : PES6A80D410RS2755 EP type number : 9 400 093 005

Governor

Governer design. : RSV325...1150A1C1165

Governer no. : 9 420 083 290

Cust. part No. :

Customer-spec. information Customer : DEUTZ ARG.

Motor : F6L913 Power KW : 96.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 1.95
Tolerance mm : + 0.05

Check

: **←** 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 9.35

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 54.5

cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s.

: +- 2.0

Spreed

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s. : 4.0

Tolerance 1/min : +-Rated speed rpm 325 rack travel mm 4.00 Rack travel in mm : 6.50 Rated speed rpm 1225 : +-Tolerance 1/min 15 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : rack travel mm : 0.85 : - 0.55 cm3/1000 strokes : +-Tolerance mm : 1380 Check tolerance Rated speed rpm cm3/1000s. 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance LOW IDLE cm3/1000s. 6.0 control lever (B) SETTING OF INJECTION PUMP position degree : 79.0 WITH GOVERNOR tolerance degree : +- 4.0 Setting point w/out bumper spring GUIDE SLEEVE POSITION 325 Rated speed rpm rack travel mm 6.00 Rated speed rpm 800 Testing: Rack travel in mm : 0.65Rated speed rpm Tolerance mm : +- 0.35 325 rack travel mm 6.50 Tolerance mm : +- 0.10 governor spring pre-tension 2.00 click setting x 5.50 rack travel mm Rated speed rpm 525 Tolerance 1/min 30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm 100 1150 Rated speed rpm : > 19.00 CRT mm min. Aneroid pressure hPa Del. quantity cm3/1000 strokes : 54.5 TORQUE CONTROL cm3/1000 strokes : +-0.5 Rated speed rpm 1150 Check tolerance cm3/1000s. rack travel mm 9.35 2.0 : +- 0.05 Tolerance mm Spreed 2.5 cm3/1000 strokes : 500 Check tolerance Rated speed rpm 11.15 cm3/1000s. 4.0 rack travel mm Tolerance mm : **←** 0.05 Rated speed rpm 800 CONTROL LEVER rack travel mm 10.35 : **←** 0.15 Tolerance mm control lever position degree 115.0 tolerance degree : +-RATED SPEED FUEL DELIVERY CHARACTERISTICS 8.30 rack travel mm 1195 Rated speed rpm

Aneroid pressure hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 62.5 cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. : +- 3.0 Aneroid pressure hPa 800 Rated speed rpm Del. quantity cm3/1000 strokes : 57.5 cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. : + 3.0BREAKAWAY Rack travel in mm : 8.30 Rated speed rpm : 1195 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.00 : : +- 1.00 Tolerance mm LOW IDLE 325 Rated speed rpm : Del. quantity 7.5 cm3/1000 strokes : cm3/1000 strokes : +-1.5 Check tolerance 3.5 cm3/1000s.Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000S.6.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 358

Injection pump

Pump designation : PES5A80D410RS2526 EP type number : 9 400 093 007

Governor

Governer design. : RSV325...1075A1C1166

: 9 420 083 291 Governer no.

Cust. part No. :

Customer-spec. information

Customer : DEUTZ ARG. : F5L913 Motor Power KW : 87.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 1.95
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1- 3- 5- 4- 2

Phasing : 0-72-144-216-288

BASIC SETTING

Rated speed rpm : 1075

Rack travel in mm: 9.45 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 53.0

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.0

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. : 4.0

Rated speed rpm : 325

F26

		+ rack travel
Rack travel in mr	n: 6.50	+ Rated speed
Tolerance mm	: +- 0.10	† Tolerance 1/1
Del. quantity	. 75	rack travel i
cm3/1000 strokes cm3/1000 strokes	· + 15	Tolerance mm
Check tolerance		Rated speed
cm3/1000s.		+
Spreed		+
cm3/1000 strokes Check tolerance	: 4.0	LOW IDLE
cm3/1000s.	: 6.0	T COM IDEE
		t control leve
(B) SETTING OF IN	NJECTION PUMP	position degree
WITH GOVERNOR		+ tolerance de
		t Sotting noin
		+ Setting point
GUIDE SLEEVE POST	ITION	Rated speed
Dadad amazal ass	. 000	† rack travel i
Rated speed rpm	: 000	† Testing:
Rack travel in mn	n: 0.65	7
Tolerance mm		Rated speed i
		+ rack travel r
governor spring		† Tolerance mm
ore-tension click setting x	. 5.50	rack travel n
ctick secting x	. 3.30	+ Rated speed
		+ Tolerance 1/m
FULL LOAD DELIVER	RY AT FULL LOAD STOP	Paked analys
Rated speed rpm	• 1075	Rated speed i
Ineroid pressure		+ CRT mm min.
nPa	: -	+
Pel. quantity		+
m3/1000 strokes		+ TORQUE CONTRO
m3/1000 strokes	: ← 0.5	†
Check tolerance	: +- 2.0	Rated speed i
:m3/1000s. Spreed	, - 2.0	+ rack travel m + Tolerance mm
m3/1000 strokes	: 2.5	T rocerance min
Check tolerance		Rated speed r
m3/1000s.	: 4.0	+ rack travel m
		+ Tolerance mm
		Rated speed r
ONTROL LEVER		rack travel m
ontrol lever		T Toterance mm
position degree	: 111.0	1
colerance degree		+
ATEN COUCH		† <u> </u>
RATED SPEED		FUEL DELIVERY
ack travel mm	: 8.40	+
Rated speed rpm	: 1120	+ Aneroid press
Tolerance 1/min	: 5	+ hPa
		+ Rated speed r

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm	: 4.00 : 1155 : + 15 : 0.85 : + 0.55
Rated speed rpm	
LOW IDLE	
control lever position degree tolerance degree	: 79.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm rack travel mm	: 325 : 6.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 6.50 : +- 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 525 : +- 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1075 : 9.45 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 10.55 : + 0.15
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: -
Rated speed rpm	: 500

Del. quantity cm3/1000 strokes : 62.5 cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : **←** 3.0 Aneroid pressure hPa Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 58.0 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : **←** 3.0 BREAKAWAY Rack travel in mm : 8.40
Rated speed rpm : 1120
Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 LOW IDLE Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 7.5 cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : +-3.5 Spreed cm3/1000 strong Check tolerance cm3/1000 strokes : 4.0 6.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.04.96 : ISO 4113

Combination No. : 9 400 085 359

Injection pump

Pump designation : PES4A80D410RS2523 EP type number

: 9 400 093 008

Governor

Governer design. : RSV325...1075A1C1166

Governer no.

: 9 420 083 291

Cust. part No. :

Customer-spec. information

Customer

: DEUTZ ARG.

Motor

: F4L913

Power KW

: 56.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 003

Outside diameter : 6.0

2.0

600

x inside diameter :

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 1.95 : +- 0.05 Tolerance mm

Check

: **←** 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1075

Rack travel in mm : 10.25

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 60.5

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.0

Spreed

cm3/1000 strokes :

2.5

Check tolerance cm3/1000s.

4.0

Rated speed rpm :

325

har

Rack travel in mm Tolerance mm	: 6.50 : +- 0.10	‡	rack travel mm Rated speed rpm Tolerance 1/min
Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 7.5 : + 1.5 : + 3.5	† + + +	rack travel mm Tolerance mm Rated speed rpm
Spreed cm3/1000 strokes Check tolerance cm3/1000S.	: 4.0 : 6.0	† † †	LOW IDLE
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	+	control lever position degree tolerance degree
			Setting point w/
GUIDE SLEEVE POSI			Rated speed rpm rack travel mm
Rated speed rpm		‡	Testing:
Rack travel in mm Tolerance mm	: 0.65 : +- 0.35	† + +	Rated speed rpm rack travel mm
governor spring pre-tension click setting x	: 5.50	+ + +	Tolerance mm rack travel mm
	····	‡	Rated speed rpm Tolerance 1/min
	Y AT FULL LOAD STOF	, †	Rated speed rpm
Rated speed rpm Aneroid pressure hPa	: 1075	‡ +	CRT mm min.
Del. quantity cm3/1000 strokes cm3/1000 strokes		† †	TORQUE CONTROL
Check tolerance cm3/1000S. Spreed	: +- 2.0	†	Rated speed rpm rack travel mm Tolerance mm
cm3/1000 strokes Check tolerance cm3/1000S.		Ī 1	Rated speed rpm rack travel mm Tolerance mm
		‡	Rated speed rpm
CONTROL LEVER		Ŧ	rack travel mm Tolerance mm
position degree tolerance degree	: 112.0 : + 4.0	†	
RATED SPEED		1	FUEL DELIVERY CH
rack travel mm Rated speed rpm Tolerance 1/min	: 1120	+	Aneroid pressure hPa Rated speed rpm

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm	: +- 15
Tolerance mm Rated speed rpm	: +- 0.55
LOW IDLE	
control lever position degree tolerance degree	: 79.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm rack travel mm	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 6.50 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 525
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1075 : 10.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.05 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 10.65 : +- 0.15
FUEL DELIVERY CHA	PACTERISTICS
Aneroid pressure	

Del. quantity cm3/1000 strokes : 61.0 cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : **←** 3.0 Aneroid pressure 750 Rated speed rpm Del. quantity cm3/1000 strokes : cm3/1000 strokes : 59.0 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : +-3.0 BREAKAWAY 9.20 Rack travel in mm : Rated speed rpm : 1120
Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 LOW IDLE 325 Rated speed rpm : Del. quantity cm3/1000 strokes : 7.5 1.5 cm3/1000 strokes : +-Check tolerance cm3/1000s. **:** ← 3.5 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s.: 6.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 365

Injection pump

Pump designation : PES6A90D410RS2823 EP type number : 0 410 896 093

Governor

Governer design. : RQV300...1350AB1278L

Governer no. : 9 420 080 359

Cust. part No. : 98455951

Customer-spec. information

Customer : FIAT ARGENTINA : 8.060.25.600 Motor

Power KW : 130.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

40

Test oil inlet

temp. °C temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.80 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1350

Rack travel in mm : 11.55 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 82.0

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 7.0

Rated speed rpm	: 300	+ Aneroid pressure	
		+ hPa	: 800
	73 .	+ Del. quantity	
Rack travel in mm		+ cm3/1000 strokes	
Tolerance mm	: +- 0.10	+ cm3/1000 strokes	: +- 0.5
Del. quantity	40.0	+ Check tolerance	. 2.5
cm3/1000 strokes		+ cm3/1000s.	: +- 2.5
cm3/1000 strokes	: 2.0	+ Spreed	. 7.0
Check tolerance	; +- 4.0	cm3/1000 strokes	: 3.0
cm3/1000s.	: +- 4.0	+ Check tolerance + cm3/1000s.	: 7.0
Spreed cm3/1000 strokes	: 4.5	T (mb/ 1000s.	. 7.0
Check tolerance	. 4.5	I	
cm3/1000s.	: 7.0		
(10000)	. , , , ,	CONTROL LEVER	
		1	
(B) SETTING OF IN	JECTION PUMP	control lever	
WITH GOVERNOR		position degree	: 116.0
		+ tolerance degree	
		+	
GUIDE SLEEVE TRAV	EL	RATED SPEED	
		}	
Rated speed rpm	: 300	🕂 rack travel mm	
guide sleeve		+ Rated speed rpm	
travel mm	: 1.25	† Tolerance 1/min	: 5
Tolerance mm	: +- 0.25	+	
		+ rack travel mm	: 4.00
Rated speed rpm	: 1015	+ Rated speed rpm	
guide sleeve		† Tolerance 1/min	: +- 15
travel mm	: 6.05	+	
Tolerance mm	: +- 0.25	+ rack travel mm	: 0.50
		+ Tolerance mm	: +- 0.50
Rated speed rpm	: 460	+ Rated speed rpm	: 1650
guide sleeve	0.45	†	
travel mm	: 2.45	†	
Tolerance mm	: +- 0.25	I OU TO E	
Datad annad ann	: 640	+ LOW IDLE	
Rated speed rpm	: 640	I	
guide sleeve travel mm	: 3.45	control lever	
Tolerance mm	: +- 0.25	position degree	: 71.0
rocer drice tikit	0.25	tolerance degree	
Rated speed rpm	: 1390	_ total allow day.	, , , , , , , , , , , , , , , , , , , ,
guide sleeve		<pre>→ Testing:</pre>	
travel mm	: 8.45	+	
Tolerance mm	: +- 0.25	Rated speed rpm	: 300
		rack travel mm	: 7.60
		+ Tolerance mm	: +- 0.10
GUIDE SLEEVE POSI	TION	+	
		+ Rated speed rpm	: 200
Rated speed rpm	: 1480	+ .	
	40.55	+ CRT mm min.	: > 8.00
Rack travel in mm		†	
Tolerance mm	: +- 1.80	+ Rated speed rpm	: 400
		†	
F	4 AT FULL LOAD OTOD	TODOLIE CONTROL	
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	+ TORQUE CONTROL	
Ontrol amount and	. 1350	Dated aread are	. 1350
Rated speed rpm	: 1330	+ Rated speed rpm	
		+ rack travel mm	. 11.22

Tolerance mm	: + 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.55 : +- 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 800 : 12.10 : ← 0.10	
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.70 : +- 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 800 : 12.55 : ← 0.05	
MEASUREMENT		
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.40 : + 0.10	
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 520 : 12.10 : + 0.10	
Pressure hPa rack travel mm Tolerance mm	: 400 : 10.75 : + 0.05	
START CUT-OUT		
Rated speed rpm Rated speed rpm	: > 100 : < 220	
Check speed 1/min	: > 80	
Check speed 1/min	: < 240	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa Rated speed rpm	: 800 : 800	

Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 81.5 : + 1.5 : + 3.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 50.0 : + 0.5 : + 2.5
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 10.50 : 1395 : + 5
STARTING FUEL DELI	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.00 : +- 1.00 : 156.0 : +- 8.0 : +- 11.0
LOW IDLE	
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: 300 : 10.0 : +- 2.0 : +- 4.0 : 4.5 : 7.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 367

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RQV350...1250AB1280L

Governer no. : 9 420 080 365

Cust. part No. : 9.0520.05.6.9505

Customer-spec. information Customer : MWM : 6.10 T Motor

Power KW

: 135.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : +- 1.50
Difference * CS : 2.00

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.05 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 96.5

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : \leftarrow 3.0

	+ Tolerance mm : +- 1.30
Spreed cm3/1000 strokes : 3.5	FULL LOAD DELTUEDY AT FULL LOAD CTOD
Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 8.0	+ Rated speed rpm : 1250 + Aneroid pressure
Rated speed rpm : 350	+ hPa : 900 + Del. quantity
Rack travel in mm : 6.10	+ cm3/1000 strokes : 96.5 + cm3/1000 strokes : + 1.0
Tolerance mm : +- 0.10 Del. quantity	+ Check tolerance + cm3/1000s. : + 3.0
cm3/1000 strokes : 16.0 cm3/1000 strokes : +- 2.0	+ Spreed + cm3/1000 strokes : 3.5
Check tolerance	- Check tolerance
cm3/1000s. : +- 4.5 Spreed	- cm3/1000s. : 8.0
cm3/1000 strokes : 5.5 Check tolerance	İ
cm3/1000s. : 9.0	CONTROL LEVER
(D) OFTENIO OF THEFOTTON DUMO	control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : 55.0 tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	control lever
	tolerance degree : +- 4.0
Rated speed rpm : 1350 guide sleeve	RATED SPEED
travel mm : 7.20 Tolerance mm : + 0.10	rack travel mm : 11.00
Rated speed rpm : 800	+ Rated speed rpm : 1318 + Tolerance 1/min : +- 8
guide sleeve travel mm : 3.95	rack travel mm : 4.00
Tolerance mm : +- 0.25	+ Rated speed rpm : 1480 + Tolerance 1/min : +- 15
Rated speed rpm : 300	rack travel mm : 0.50
guide sleeve travel mm : 1.05	+ Tolerance mm : +- 0.50
Tolerance mm : +- 0.25	Rated speed rpm : 1650
Rated speed rpm : 550 guide sleeve	
travel mm : 2.75 Tolerance mm : +- 0.25	+ LOW IDLE
Rated speed rpm : 1500 guide sleeve	control lever position degree : 69.0
travel mm : 8.55	tolerance degree : +- 4.0
Tolerance mm : +- 0.25	control lever
GUIDE SLEEVE POSITION	position degree : 14.0 tolerance degree : +- 4.0
Rated speed rpm : 1490	Testing:
Rack travel in mm : 16.50	Rated speed rpm : 350

rack travel mm Tolerance mm	: 6.10 : + 0.10	+ Check + speed 1/min : < 290
Rated speed rpm	: 100	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 8.50	Aperoid pressure
Rated speed rpm	: 400	hPa : 900 + Rated speed rpm : 750
TORQUE CONTROL		Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 12.05 : +- 0.05	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm Tolerance mm		+ Aneroid pressure + hPa : 900 + Rated speed rpm : 1050 + Del. quantity + cm3/1000 strokes : 99.5 + cm3/1000 strokes : +- 2.0
Rated speed rpm rack travel mm Tolerance mm	: 12.25 : +- 0.05	Check tolerance cm3/1000s. : + 4.0
ANEROID/ALTITUDE COMPENSATOR TEST		hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 49.0
SETTING		+ cm3/1000 strokes : +- 1.0 + Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 12.45	+ cm3/1000s. : +- 3.0 +
MEASUREMENT		Rack travel in mm : 11.00
Pressure hPa Rated speed rpm	: - : 500	Rated speed rpm : 1318 Tolerance 1/min : +- 8
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 520 : 2.25 : + 0.15	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00
Pressure hPa rack travel mm Tolerance mm	: 260 : 0.80 : + 0.10	Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 155.0 cm3/1000 strokes : +- 8.0 Check tolerance
START CUT-OUT		cm3/1000s. : +- 11.0
Rated speed rpm Rated speed rpm		
Check speed 1/min	: > 80	LOW IDLE Rated speed rpm : 350

Del. quantity		
cm3/1000 strokes	:	16.0
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000S.	: +-	4.5
Spreed		
cm3/1000 strokes	:	5.5
Check tolerance		
cm3/1000s.	:	9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 373

Injection pump

Pump designation : PES6A95D410RS2795 EP type number : 9 400 084 020

Governor

Governer design. : RSV350...1250A0C1169

: 9 420 083 296 Governer no.

Cust. part No. :

Customer-spec. information Customer : MBB

: OM 366 Motor Power KW : 94.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 3.25 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 8.65 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 63.5

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. 3.0

Spreed

cm3/1000 strokes :

3.5

Check tolerance 8.0 cm3/1000s.

Rated speed rpm	: 350	Tolerance 1/min : +- 5
Rack travel in mm Tolerance mm Del. quantity	: 7.00 : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1347 Tolerance 1/min : +- 15
cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.		rack travel mm : 0.85 Tolerance mm : 0.55 Rated speed rpm : 1500
Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: 5.5 : 9.0	LOW IDLE
(B) SETTING OF INJE	ECTION PUMP	<pre>control lever position degree : 82.0 tolerance degree : +- 4.0</pre>
	<u> </u>	Setting point w/out bumper spring
GUIDE SLEEVE POSIT	+	Rated speed rpm : 350 rack travel mm : 6.50
Rated speed rpm	+	Testing:
Rack travel in mm : Tolerance mm		Rated speed rpm : 350 rack travel mm : 7.00
governor spring pre-tension	1	Tolerance mm : +- 0.10
click setting x	: 5.00	rack travel mm : 2.00 Rated speed rpm : 475 Tolerance 1/min : +- 30
FULL LOAD DELIVERY	AT FULL LOAD STOP	
Rated speed rpm : Aneroid pressure hPa :	: 1250 : -	Rated speed rpm : 100 CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes : cm3/1000 strokes :		TORQUE CONTROL
Check tolerance	: + 3.0	Rated speed rpm : 1250 rack travel mm : 8.65 Tolerance mm : + 0.05
Check tolerance cm3/1000s.	8.0	Rated speed rpm : 500 rack travel mm : 8.70 Tolerance mm : + 0.10
CONTROL LEVER		Rated speed rpm : 400 rack travel mm : 10.10 Tolerance mm : + 0.30
control lever position degree : tolerance degree :	110.0	
RATED SPEED	Ŧ	
rack travel mm : Rated speed rpm :	7.60 + 1295 +	BREAKAWAY

Rack travel in mm : 7.60
Rated speed rpm : 1295
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 101.5 cm3/1000 strokes : + 7.5 Check tolerance cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm : 350

Del. quantity
cm3/1000 strokes : 12.0
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
cm3/1000 strokes : 5.5
Check tolerance
cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.04.96 Test oil : ISO 4113

Combination No. : 9 400 085 374

Injection pump

Pump designation : PES6A95D410RS2772 EP type number : 9 400 084 018

Governor

Governer design. : RSV350...1250AOC1170

: L

Governer no. : 9 420 083 297

Cust. part No. :

Customer-spec. information
Customer : MBB
Motor : OM 366 A
Power KW : 121.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 9.65
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 82.0

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.0

. TO 3.0

Spreed

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 8.0

G14

Rated speed rpm : 350	+ Tolerance 1/min : + 5
	+ rack travel mm : 4.00
Rack travel in mm: 6.80	+ Rated speed rpm : 1340
Tolerance mm : + 0.10	+ Tolerance 1/min : + 15
Del. quantity	
cm3/1000 strokes : 15.0	rack travel mm : 1.00
cm3/1000 strokes : +- 2.0	+ Tolerance mm : '- 0.70
	•
Check tolerance cm3/1000s. : +- 5.0	+ Rated speed rpm : 1500
	Ť
Spreed cm3/1000 strokes · 5 5	†
CINO 1000 SET ORCS . 3.3	1011 701 5
Check tolerance	+ LOW IDLE
cm3/1000s. : 9.0	†
	†
	+ control lever
(B) SETTING OF INJECTION PUMP	+ position degree : 75.0
WITH GOVERNOR	tolerance degree : + 4.0
	† • · · · · · · · · · · · · · · · · · ·
	+ Setting point w/out bumper spring
CHARL OF THE POCATION	t Datadanasi 750
GUIDE SLEEVE POSITION	+ Rated speed rpm : 350 + rack travel mm : 6.30
200	+ rack travel mm : 6.30
Rated speed rpm : 800	T
Deal have lines . O. (5	† Testing:
Rack travel in mm: 0.65	Data dama a 250
Tolerance mm : + 0.35	+ Rated speed rpm : 350
	rack travel mm : 6.80
governor_spring	+ Tolerance mm : +- 0.10
pre-tension	+
click setting x : 3.25	+ rack travel mm : 2.00
	+ Rated speed rpm : 450
	+ Tolerance 1/min : +- 30
FULL LOAD DELIVERY AT FULL LOAD STOP	+
	+ Rated speed rpm : 100
Rated speed rpm : 1250	†
Aneroid pressure	+ CRT mm min. : > 19.00
hPa : -	+
Del. quantity	+
cm3/1000 strokes : 82.0	+ TORQUE CONTROL
cm3/1000 strokes : +- 1.0	+
Check tolerance	+ Rated speed rpm : 1250
$cm3/1000s.$: \leftarrow 3.0	+ rack travel mm : 9.65
Spreed	+ Tolerance mm : $+$ 0.05
cm3/1000 strokes : 3.5	}
Check tolerance	+ Rated speed rpm : 800
cm3/1000s. : 8.0	+ rack travel mm : 9.65
	\perp Tolerance mm : \leftarrow 0.05
	+
	+ Rated speed rpm : 500
CONTROL LEVER	+ rack travel mm : 9.70
	+ Tolerance mm : + 0.10
control lever	+
position degree : 103.0	Rated speed rpm : 400
tolerance degree : +- 4.0	rack travel mm : 11.10
	+ Tolerance mm : +- 0.30
RATED SPEED	1
	+
rack travel mm : 8.60	1
Rated speed rpm : 1295	1
THE COLUMN TRACE OF THE CO	T .

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Rated speed rpm 800

Del. quantity

cm3/1000 strokes : 74.0 cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s.4.0

BREAKAWAY

Rack travel in mm : 8.60 Rated speed rpm Tolerance 1/min

STARTING FUEL DELIVERY

100 Rated speed rpm : 14.00 rack travel mm Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 105.0 cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s.: +- 13.0

LOW IDLE

350 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 15.0 cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 5.0

Spreed

cm3/1000 strokes : 5.5

Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.04.96 : ISO 4113

Combination No. : 9 400 085 375

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RSV350...1250A8C808L

Governer no. : 9 420 083 298

Cust. part No. : 9.0520.05.6.9506

Customer-spec. information

Customer : MWM

Motor

: 6.10 TCA

Power KW

: 158.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

G17

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

2.80

rrestroke mm : +-: +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

: 10,50 travel Tolerance mm : +- 1.50 Difference * CS : 2.00

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.35

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 119.5

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

	_
Spreed cm3/1000 strokes : 3.5	control lever position degree : 107.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 8.0	RATED SPEED
Rated speed rpm : 350	rack travel mm : 12.30 Rated speed rpm : 1305 Tolerance 1/min : +- 5
Rack travel in mm: 6.50 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 20.5 cm3/1000 strokes: + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed cm3/1000 strokes: 5.5 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1360 Tolerance 1/min : +- 15 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1500
cm3/1000s. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 65.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 350 rack travel mm : 6.00
Rack travel in mm : 0.65 Tolerance mm : +- 0.35	† Testing:
governor spring pre-tension click setting x : 4.00	Rated speed rpm : 350 rack travel mm : 6.50 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	rack travel mm : 2.00 Rated speed rpm : 435 Tolerance 1/min : +- 30
Rated speed rpm : 1250 Aneroid pressure hPa : -	Rated speed rpm : 100
Del. quantity cm3/1000 strokes : 119.5 cm3/1000 strokes : +- 1.0	CRT mm min. : > 19.00
Check tolerance cm3/1000s. : + 3.0	TORQUE CONTROL
Spreed cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 1250 rack travel mm : 13.35 Tolerance mm : +- 0.05
	Rated speed rpm : 600 rack travel mm : 13.35 Tolerance mm : + 0.05
CONTROL LEVER	Rated speed rpm : 400 rack travel mm : 14.80

Tolerance mm : + 0.30

BREAKAWAY

Rack travel in mm : 12.30 Rated speed rpm : 1305 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm : rack travel mm : 100 20.00 Tolerance mm : +- 1.00 Del. quantity

cm3/1000 strokes : 156.0 cm3/1000 strokes : + 8.0 Check tolerance

cm3/1000s. : + 11.0

LOW IDLE

Rated speed rpm : 350

Del. quantity cm3/1000 strokes : cm3/1000 strokes : +-20.5 2.0

Check tolerance

cm3/1000s. 4.5

Spreed

cm3/1000 strokes : 5.5

Check tolerance

: 9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 10.04.96

Test oil

: ISO 4113

Combination No. : 9 400 085 376

Injection pump

Pump designation: PES4A95D320RS2807

EP type number

: 0 410 894 994

Governor

Governer design. : RSV375...1150A2C2282

Governer no.

: 9 420 083 302

Cust. part No.

Customer-spec. information : VALMET Customer : 420 DS Motor Power KW 77.2

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : +-1.0

2.40 Prestroke mm Tolerance mm : +- 0.05

Check

: + 0.10tolerance mm

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

: 1-2-4-3 Firing order

Phasing : 0-90-180-270

Beginning of delivery differende

and maximum rack

travel 10.50 Tolerance mm : +- 1.50 Difference * CS : 5.00

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 12.25 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 101.0

cm3/1000 strokes : + 1.0

Check tolerance

3.0 cm3/1000s.

Spreed

G20

cm3/1000 strokes : 3.5	t control lever
Check tolerance cm3/1000s. : 8.0	position degree : 101.0 tolerance degree : + 4.0
Rated speed rpm : 375	RATED SPEED
Rack travel in mm: 5.60 Tolerance mm: + 0.10 Del. quantity	rack travel mm : 11.20 Rated speed rpm : 1195 Tolerance 1/min : +- 5
cm3/1000 strokes : 20.0 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5	rack travel mm : 4.00 Rated speed rpm : 1290 Tolerance 1/min : +- 15
Spreed : 5.5 Check tolerance cm3/1000s. : 9.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 75.0 tolerance degree : + 4.0
Rated speed rpm : 800	+ control lever
Rack travel in mm: 0.65 Tolerance mm: +- 0.35	<pre>position degree : 25.0 tolerance degree : + 4.0</pre>
	Setting point w/out bumper spring
governor spring pre-tension click setting x : 5.00	Rated speed rpm : 375 rack travel mm : 5.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
Rated speed rpm : 1150 Aneroid pressure hPa : -	Rated speed rpm : 375 rack travel mm : 5.60 Tolerance mm : + 0.10
Del. quantity cm3/1000 strokes : 101.0 cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : +- 30
cm3/1000s. : +- 3.0	Rated speed rpm : 100
Spreed cm3/1000 strokes : 3.5 Check tolerance	CRT mm min. : > 19.50
cm3/1000s. : 8.0	TORQUE CONTROL
CONTROL LEVER	Rated speed rpm : 1150 - rack travel mm : 12.25 - Tolerance mm : +- 0.05
control lever position degree : 51.0 tolerance degree : + 4.0	Rated speed rpm : 500 rack travel mm : 12.75
-04	

Tolerance mm : \leftarrow 0.05

Rated speed rpm : 700 rack travel mm : 12.75 Tolerance mm : + 0.05

Rated speed rpm : 950 rack travel mm : 12.45 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 101.0 cm3/1000 strokes : \leftarrow 2.0

Check tolerance

: ← 4.0 cm3/1000s.

BREAKAWAY

Rack travel in mm: 11.20 Rated speed rpm : 1195 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00

Del. quantity

cm3/1000 strokes : 202.0 cm3/1000 strokes : \leftarrow 8.0 Check tolerance

cm3/1000s.: +- 11.0

LOW IDLE

Rated speed rpm : 375

Del. quantity

cm3/1000 strokes : 20.0 cm3/1000 strokes : +- 2.0 Check tolerance

: +- 4.5 cm3/1000s.

Spreed

cm3/1000 strokes : 5.5

Check tolerance cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 07.06.96 : 07.06.96 : ISO 4113

Combination No. : 9 400 085 384

Injection pump

Pump designation : PES4A95D41ORS2887 EP type number : 9 400 084 040

Governor

Governer design. : RQV300...1300AB1307L

Governer no.

: 9 420 080 385

Cust. part No. : 0260745402

Customer-spec. information

Customer : MBB

Motor

: OM 364A/ EURO I

Power KW

: 81.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

: 173.5

Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.00

Tolerance mm

: +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 85.0

cm3/1000 strokes : +-

Check tolerance cm3/1000s.

: +-

Spreed

cm3/1000 strokes :

3.5

3.0

Check tolerance

cm3/1000s.

8.0

Rated speed rpm : 300

Rack travel in mm : 8.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 13.0 cm3/1000 strokes : + 2.0	cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : +- 4.5 spreed cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0	control Lever position degree : 59.0 tolerance degree : +- 4.0 control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : 110.0 tolerance degree : +- 4.0 RATED SPEED
GUIDE SLEEVE TRAVEL Rated speed rpm : 300	rack travel mm : 10.00 Rated speed rpm : 1345 Tolerance 1/min : +- 5
guide sleeve travel mm : 1.05 Tolerance mm : + 0.25	rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15
Rated speed rpm : 1500 guide sleeve travel mm : 8.55 Tolerance mm : + 0.05	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1640
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10	control lever position degree : 71.0 tolerance degree : + 4.0 control lever
GUIDE SLEEVE POSITION	position degree : 22.0 tolerance degree : + 4.0
Rated speed rpm : 1500	Testing:
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	Rated speed rpm : 300 rack travel mm : 8.20 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1300 Aneroid pressure	CRT mm min. : > 9.50
hPa : 700 Del. quantity	Rated speed rpm : 415
cm3/1000 strokes : 85.0 cm3/1000 strokes : +- 1.0 Check tolerance	TORQUE CONTROL
cm3/1000s. : +- 3.0 Spreed	Rated speed rpm : 1300 rack travel mm : 11.05

Tolerance mm	: +- 0.05	+ cm3/1000 strokes : +- 2.0 + Check tolerance
Rated speed rpm rack travel mm	: 11.95	cm3/1000s. : +- 4.0
Tolerance mm	: +- 0.05	Aneroid pressure hPa : -
Rated speed rpm	: 950 : 11.35	Rated speed rpm : 500
rack travel mm Tolerance mm	: +- 0.05	- cm3/1000 strokes : 57.5 - cm3/1000 strokes : + 1.0
Rated speed rpm rack travel mm	: 800 : 11.65	- Check tolerance - cm3/1000s. : +- 3.0
Tolerance mm	: + 0.05	
ANEROID/ALTITUDE		- BREAKAWAY
COMPENSATOR TEST		Rack travel in mm : 10.00
SETTING		Rated speed rpm : 1345 Tolerance 1/min : + 5
Rated speed rpm Pressure hPa	: 500 · 700	
rack travel mm Tolerance mm	: 11.95	STARTING FUEL DELIVERY
MEASUREMENT	0.03	Rated speed rpm : 100 rack travel mm : 14.20
Pressure hPa		Tolerance mm : + 0.10 Del. quantity
Rated speed rpm	500	+ cm3/1000 strokes : 82.5 + cm3/1000 strokes : + 7.5
Rated speed rpm	: 500	+ Check tolerance + cm3/1000s. : +- 10.0
Pressure hPa rack travel mm	: 240 : 0.35	10.0
Tolerance mm	: + 0.05	
Pressure hPa		LOW IDLE
rack travel mm Tolerance mm	: + 0.10	Rated speed rpm : 300
		+ Del. quantity - cm3/1000 strokes : 13.0
START CUT-OUT	. 400	cm3/1000 strokes : + 2.0 Check tolerance
Rated speed rpm Rated speed rpm		cm3/1000s. : +- 4.5 Spreed
Check		cm3/1000 strokes : 5.5 Check tolerance
speed 1/min Check	: > 80	+ cm3/1000s. : 9.0
speed 1/min	: < 260	‡
FUEL DELIVERY CHA	ARACTERISTICS	
Aneroid pressure	. 700	End of test specification sheet
hPa Rated speed rpm	: 700 : 800	‡
Del. quantity cm3/1000 strokes	: 81.5	‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.04.96 : ISO 4113

Combination No. : 9 400 085 386

Injection pump

Pump designation : PES6A95D41DRS2812 : 9 400 084 028 EP type number

Governor

Governer design. : RQV350...1300AB1304L

Governer no.

: 9 420 080 382

Cust. part No.

Customer-spec. information Customer : MWM : 6.10 T Motor : 124.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.80 : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Beginning of delivery differende

and maximum rack

10.50 travel Tolerance mm : +- 1.50 Difference ° CS : 2.00

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.65 : + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 91.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

	+ Tolerance mm : +- 1.30
Spreed cm3/1000 strokes : 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 1300
	+ Aneroid pressure
Rated speed rpm : 350	hPa : 900 Del. quantity
Rack travel in mm : 5.80	+ cm3/1000 strokes : 91.0 + cm3/1000 strokes : +- 1.0
Tolerance mm : + 0.10	+ Check tolerance
Del. quantity cm3/1 000 strokes : 12.5	+ cm3/1000s. : + 3.0 + Spreed
cm3/1000 strokes : +- 2.0	+ cm3/1000 strokes : 3.5
Check tolerance cm3/1000s. : +- 4.5	+ Check tolerance + cm3/1000s. : 8.0
Spreed : +- 4.5	+ (1112) (10003 0.0
cm3/1000 strokes : 5.5	†
Check tolerance cm3/1000s. : 9.0	CONTROL LEVER
	control lever
(B) SETTING OF INJECTION PUMP	+ position degree : 58.0
WITH GOVERNOR	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	position degree : 113.0
Rated speed rpm : 1350	tolerance degree : +- 4.0
guide sleeve	RATED SPEED
travel mm : 7.20 Tolerance mm : + 0.10	rack travel mm : 10.60
rocer diffee man	Rated speed rpm : 1418
Rated speed rpm : 800 guide sleeve	+ Tolerance 1/min : + 8
travel mm : 3.95	+ rack travel mm : 4.00
Tolerance mm : +- 0.25	Rated speed rpm : 1550 Tolerance 1/min : +- 15
Rated speed rpm : 300	+
guide sleeve	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
travel mm : 1.05 Tolerance mm : + 0.25	+ Tolerance mm : +- 0.50 + Rated speed rpm : 1700
	+
Rated speed rpm : 550 guide sleeve	<u> </u>
travel mm : 2.75	LOW IDLE
Tolerance mm : + 0.25	†
Rated speed rpm : 1500	control lever
guide sleeve	position degree : 69.0
travel mm : 8.55	tolerance degree : +- 4.0
Tolerance mm : + 0.25	control lever
GUIDE SLEEVE POSITION	position degree : 13.0 tolerance degree : + 4.0
Rated speed rpm : 1485	† Testing:
Rack travel in mm: 16.50	Rated speed rpm : 350

rack travel mm	: 5.80	+
Tolerance mm	: +- 0.10	+ Check
		+ speed 1/min : > 80
Rated speed rpm	: 100	+ Check
Marca Speca (pill	. 100	+ speed 1/min : < 290
CRT mm min.	; > 8.00	T speed 1/11/11 270
CRI mm min.	. > 8.00	T
Dated aread nom	: 400	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	. 400	T FOEL DELIVERY CHARACTERISTICS
		Aneroid pressure
TORQUE CONTROL		hPa : 900
TORAGE CONTROL		
D-A-1	. 1700	The state of the s
Rated speed rpm		+ Del. quantity
rack travel mm		+ cm3/1000 strokes : 93.0
Tolerance mm	: ← 0.05	+ cm3/1000 strokes : + 2.0
		+ Check tolerance
Rated speed rpm	: 800	+ cm3/1000s. : +- 4.0
rack travel mm	: 12.05	†
rack travel mm Tolerance mm	: +- 0.05	+ Aneroid pressure
		-
Rated speed rpm	: 880	+ Rated speed rpm : 500
rack travel mm	: 12.05	+ Del. quantity
Tolerance mm		+ cm3/1000 strokes : 51.0
, see, give nui		+ cm3/1000 strokes : +- 1.5
Rated speed rpm	• 1260	+ Check tolerance
rack travel mm	. 11 45	+ cm3/1000s. : +- 3.0
Tolerance mm	: +- 0.05	T Chb/10003
Toterance nan	. — 0.03	T
		BREAKAWAY
ANEDOTO / AL TITUDE		TOREARAWAT
ANEROID/ALTITUDE		Ť
COMPENSATOR TEST		† D. J. J. W. 1971
		+ Rack travel in mm : 10.60
		+ Rated speed rpm : 1418
SETTING		+ Tolerance 1/min : +- 8
		+
Rated speed rpm		†
Pressure hPa		
rack travel mm	: 12.05	+ STARTING FUEL DELIVERY
Tolerance mm	: +- 0.05	+
		Rated speed rpm : 100
MEASUREMENT		rack travel mm : 20.00
		+ Tolerance mm : + 1.00
Pressure hPa	: -	+ Del. quantity
Rated speed rpm	500	+ cm3/1000 strokes : 155.0
matea opeca i pili	. 200	- cm3/1000 strokes : + 8.0
Rated speed rpm	: 500	Check tolerance
varen sheen i hill	. 500	- cm ³ /1000s. : +- 11.0
Decering hos	: 470	I (11.0
Pressure hPa		Ţ
rack travel mm	: 1.75	T
Tolerance mm	: +- 0.15	†
	270	LOUTDIE
Pressure hPa	: 270	+ LOW IDLE
rack travel mm	: 0.60	†
Tolerance mm	: +- 0.10	+ Rated speed rpm : 350
		+ Del. quantity
		— + cm3/1000 strokes : 12.5
START CUT-OUT		+ cm3/1000 strokes : $+$ 2.0
		+ Check tolerance
Rated speed rpm	: > 100	+ cm3/1000s. : + 4.5
Rated speed rpm	: < 270	Spreed
		•

cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 11.04.96

Test oil

: ISO 4113

Combination No. : 9 400 085 389

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RQV350...1300AB1309L

Governer no.

: 9 420 080 386

Cust. part No. :

Customer-spec, information

Customer

: MWM

Motor

: 6.10 TCA

Power KW

: 138.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve

: 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

2.0 x inside diameter: x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 2.85 Prestroke mm : +- 0.05

Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

10.50

Tolerance mm : +-: +- 1.50

Difference * CS : 2.00

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.95

: + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 99.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: +- 3.0

+	Tolerance mm : +- 1.30
Spreed	•
cm3/1000 strokes : 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 8.0	· Rated speed rpm : 1300
Rated speed rpm : 350	Aneroid pressure hPa : 900
rated speed (piii . 330	Del. quantity
Rack travel in mm: 5.80	cm3/1000 strokes : 99.0 cm3/1000 strokes : +- 1.0
Tolerance mm : +- 0.10	Check tolerance
Del. quantity	cm3/1000s. : +- 3.0
cm3/1000 strokes : 13.0	Spreed
cm3/1000 strokes : + 2.0	cm3/1000 strokes : 3.5
Check tolerance	Check tolerance
cm3/1000s. : +- 4.5	cm3/1000s. : 8.0
Spreed	
cm3/1000 strokes : 5.5 Check tolerance	
cm3/1000s. : 9.0	CONTROL LEVER
4	control lever
(B) SETTING OF INJECTION PUMP	position degree : 59.0
WITH GOVERNOR	tolerance degree : +- 4.0
+	
+	control lever
GUIDE SLEEVE TRAVEL	position degree : 114.0
4750	tolerance degree : +- 4.0
Rated speed rpm : 1350	DATEN CREEN
guide sleeve + travel mm : 7.20 +	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 10.90
Total alice limit	Rated speed rpm : 1425
Rated speed rpm : 800	Tolerance 1/min : + 5
guide sleeve	
travel mm : 3.95	rack travel mm : 4.00
Tolerance mm : +- 0.25	Rated speed rpm : 1560
Rated speed rpm : 300	Tolerance 1/min : + 15
guide sleeve	rack travel mm : 0.50
travel mm : 1.05	Tolerance mm : + 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1730
Rated speed rpm : 550 +	
guide sleeve	
travel mm : 2.75	LOW IDLE
Tolerance mm : \leftarrow 0.25	
Rated speed rpm : 1500	control lever
guide sleeve	position degree : 69.0
travel mm : 8.55	tolerance degree : +- 4.0
Tolerance mm : +- 0.25	control lever
<u></u> 1	position degree : 13.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0
GOING OFFICE LOOISION	total alice degree Tio
Rated speed rpm : 1490	Testing:
Rack travel in mm: 16.50	Rated speed rpm : 350

rack travel mm Tolerance mm	: 5.80 : +- 0.10
Rated speed rpm	: 100
CRT mm min.	: > 8.00
Rated speed rpm	: 400
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.95 : ← 0,05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.95 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 11.95 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm	: - 500
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 380 : 1.80 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 190 : 0.55 : + 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	
Check speed 1/min Check	: > 80
speed 1/min	: < 290

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	 : 900 : 800 : 94.5 : + 2.0 : + 4.0 : - 500 : 51.0 : + 1.0 : + 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1425
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.00 : + 1.00 : 155.0 : + 8.0
LOW IDLE	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.10.96 Test oil : ISO 4113

Combination No. : 9 400 087 319

Injection pump

Pump designation : PE6P110A720RS371-1

EP type number : 0 411 816 166

Governor

Governer design. : RQV300...1050PA747

Governer no. : 9 420 080 195

Cust. part No. :

Customer-spec. information

Customer : MBB

Motor

: OM 355 A

Power KW

: 210.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance *C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde assembly : 0 681 343 009

assembly

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 004

Outside diameter : 6.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 11.55

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 162.0

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 4.0

Spreed

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s.

: 7.5

H06

Rated speed rpm :	300 +	Check tolerance		
	+	cm3/1000s.	: +- 4.0	•
Deal Annual to an a	, m	Spreed	: 4.0	
Rack travel in mm : Tolerance mm : +-	0.10	cm3/1000 strokes Check tolerance		
Del. quantity	J. 10	cm3/1000s.	: 7.5	
cm3/1000 strokes :	18.5	CIII 7 10000.	. ,.,	
cm3/1000 strokes : +-				
Check tolerance	+			
cm3/1000s. : +-	5.0	CONTROL LEVER		
Spreed	, <u> </u>			
cm3/1000 strokes :	4.5	control lever	. 47.0	
Check tolerance cm3/1000s. :	7.5	position degree tolerance degree		
CIID7 10003	' ³ I	toterance degree	. +- 4.0	
	1	control lever		
(B) SETTING OF INJECTION	ON PUMP 1	position degree	: 103.0	
WITH GOVERNOR	+	tolerance degree		
	+	_		
	+	RATED SPEED		
GUIDE SLEEVE TRAVEL	†		. 40.50	
Dated aread us 4	1070	rack travel mm Rated speed rpm		
Rated speed rpm : 1 guide sleeve	I I	Tolerance 1/min		
	8.55	rocerance irmin	• •	
Tolerance mm : +-	0.05	rack travel mm	: 4.00	
	1	Rated speed rpm		
Rated speed rpm :	800	Tolerance 1/min		
guide sleeve	+			
	5.65	rack travel mm	: 0.50	
Tolerance mm : +-	0.15	Tolerance mm		
Rated speed rpm :	270	Rated speed rpm	: 1300	
Rated speed rpm : guide sleeve	I			
	1.00			
	0.20	LOW IDLE		
	+			
	450 +			
guide sleeve	+	control lever	50.0	
	2.95	position degree		
Tolerance mm : +-	0.15	tolerance degree	: +- 4.0	
	I	control lever		
GUIDE SLEEVE POSITION	1	position degree	: 16.0	
	1	tolerance degree	: +- 4.0	
Rated speed rpm : 1	070			
	+	Testing:		
Rack travel in mm :		Bakad and Jane	. 700	
Tolerance mm : +-	1.50	Rated speed rpm	: 3UU . 4 00	
	I	rack travel mm Tolerance mm	· +- 0.00	
FULL LOAD DELIVERY AT F	FULL LOAD STOP	TO COT GLICO HIM	0.10	
THE COMP PECTACINI ALL	1	Rated speed rpm	: 100	
Rated speed rpm : 1	050			
Aneroid pressure	+	CRT mm min.	: > 8.60	
hPa :	- +			
Del. quantity	+	Rated speed rpm	: 305	
cm3/1000 strokes :	162.0			
cm3/1000 strokes : +-	1.0 †	TODOUE CONTROL		
	+	TORQUE CONTROL		

Rated speed rpm	: 1050
rack travel mm	: 11.55
Tolerance mm	: + 0.05
Rated speed rpm	: 500
rack travel mm	: 11.55
Tolerance mm	: + 0.05
CTART OUT OUT	

START CUT-OUT

Rated	speed	rpm	: >	100
Rated	speed	rpm	: <	230

Check

speed 1/min	; >	80
Check speed 1/min	: <	270

FUEL DELIVERY CHARACTERISTICS

	Aneroid	pressure
--	---------	----------

hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	154.

cm3/1000 strokes	:		154.0
cm3/1000 strokes	:	+-	2.0
Check tolerance			

Check tolerance

cm3/1000s. : +- 5.0

BREAKAWAY

Rack travel in mm	:	10.50
Rated speed rpm	:	1095
Tolerance 1/min	:	+ 5

STARTING FUEL DELIVERY

Rated	speed	rpm	:	100
		•		

Del. quantity

cm3/1000 strokes : 132.5 cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 18.5 cm3/1000 strokes : + 2.5
Check tolerance
cm3/1000s. : + 5.0
Spreed
cm3/1000 strokes : 4.5
Check tolerance
cm3/1000s. : 7.5

End of test specification sheet

H08

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 06.06.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 066 707

Injection pump

Pump designation : PES6P120A120RS3358 EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P2A618

Governer no. : 0 421 833 513

Cust. part No. : 3927356

Customer-spec. information

Customer : CDC

: 6BTA ELITE Motor

Power KW : 136.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0 40

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0 Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +~ 0.50

Start of delivery blocking

*NW after s.o.d. : 6.75

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.35

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 146.5 cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : + 3.0	CONTROL LEVER
Spreed cm3/1000 strokes : 4.0	+ control lever + position degree : 103.0 + tolerance degree : + 4.0
Check tolerance cm3/1000s. : 7.5	RATED SPEED
Rated speed rpm : 475	rack travel mm : 10.30 Rated speed rpm : 1175 Tolerance 1/min : +- 5
Rack travel in mm : 5.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 24.5 cm3/1000 strokes : + 2.0	rack travel mm : 6.50 Rated speed rpm : 1230 Tolerance 1/min : + 5 rack travel mm : 0.85
Check tolerance cm3/1000s. : + 4.5 Spreed cm3/1000 strokes : 6.0	Tolerance mm : +- 0.55 Rated speed rpm : 1375
Check tolerance cm3/1000s. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 84.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 475 rack travel mm : 4.90
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Testing:
governor spring - pre-tension - click setting x : 3.75	Rated speed rpm : 475 rack travel mm : 5.40 Tolerance mm : + 0.10 Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 19.00
Rated speed rpm : 1100	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 11.35 Tolerance mm : + 0.05
cm3/1000 strokes : 4.0	+

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa 1200

MEASUREMENT

Pressure hPa 500 Rated speed rpm : 8.45 rack travel mm : +- 0.20 Tolerance mm

500 Rated speed rpm

008 Pressure hPa 10.65 rack travel mm : + 0.20 Tolerance mm

545 Pressure hPa 9.50 rack travel mm : : **←** 0.20 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity

cm3/1000 strokes : 86.5 cm3/1000 strokes : +-1.0

Check tolerance

3.0 cm3/1000s.

BREAKAWAY

Rack travel in mm : 10.30 Rated speed rpm : 1175 Tolerance 1/min : +-

STARTING FUEL DELIVERY

100 Rated speed rpm 21.00 rack travel mm : : +- 0.50 Tolerance mm Del. quantity

cm3/1000 strokes : 165.0 cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : **←** 25.0

LOW IDLE

Rated speed rpm : 475

Del. quantity cm3/1000 strokes : 24.5 cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. : +-4.5

Spreed

cm3/1000 strokes : 6.0

Check tolerance

9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 15.05.96 : ISO 4113

Combination No. : 0 402 736 834

Injection pump

Pump designation : PES6P120A120RS7265

EP type number : 0 412 726 882

Governor

Governer design. : RQV350...1100PA964

: -12K

Governer no.

: 0 421 815 323

Cust. part No. : 3922471

Customer—spec. information : CDC Customer : 6CTA-A Motor Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.30

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50

: +- 0.50 Tolerance

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.95 Tolerance mm : \leftarrow 0.05

H12

Del. quantity cm3/1000 strokes	: 211.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 375
Rack travel in mm Tolerance mm Del. quantity	: 6.80 : + 0.20
cm3/1000 strokes cm3/1000 strokes Check tolerance	: 23.5 : +- 3.0
cm3/1000s.	: 5.0
Spreed cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 1100 : 1200 : 211.0 : + 1.0 : + 4.0 : 5.0 : 9.0
Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	: 1200 : 211.0 : + 1.0 : + 4.0 : 5.0

rack travel mm Rated speed rpm Tolerance 1/min	: 12.40 : 1280 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1500
LOW IDLE	
control lever position degree tolerance degree	: 71.0 : + 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 375 : 6.80 : + 0.20
Rated speed rpm	: 275
CRT mm min.	: > 8.30
Rated speed rpm	: 425
TORQUE CONTROL	·
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.95 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.20 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 13.50 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.40 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	

Rated speed rpm Pressure hPa	: 1100 : 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 8.90 : + 0.20
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 650 : 12.70 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 310 : 10.20 : + 0.20
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min Check	: > 80
speed 1/min	: < 300
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 750
cm3/1000 strokes cm3/1000 strokes	
Check tolerance cm3/1000s.	: ← 6.0
Spreed cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
Aneroid pressure hPa	: -
Rated speed rpm Del. quantity	: 1100
cm3/1000 strokes	: 86.5 : +- 1.0
cm3/1000 strokes	. ' '

Rack travel in mm : 12.40
Rated speed rpm : 1280
Tolerance 1/min : + 15

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 200.0 cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 375

Del. quantity
cm3/1000 strokes : 23.5
cm3/1000 strokes : + 3.0

Check tolerance
cm3/1000s. : + 5.0

Spreed
cm3/1000 strokes : 8.0

Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 : ISO 4113 Test oil

Combination No. : 0 402 736 837

Injection pump

Pump designation : PES6P120A120RS7265

EP type number : 0 412 726 882

Governor

Governer design. : RQV350...1100PA964

: -15K

: 0 421 815 332 Governer no.

Cust. part No. : 3922449

Customer-spec. information : CDC Customer : 6CTA-A Motor Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

: 2 417 413 093 Overflow valve

Inlet press. bar : 1.5 Tolerance bar $: \leftarrow 0.1$

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

bar 208.5 Tolerance bar

: 1 680 750 015 Test Lines

Outside diameter : 6.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

4.00 Prestroke mm Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 : + - 0.50

Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

1000 Rated speed rpm :

Rack travel in mm: 13.85 Tolerance mm : \leftarrow 0.05

		1	
Del. quantity cm3/1000 strokes	: 216.5	rack travel mm Rated speed rpm Tolerance 1/min	
cm3/1000 strokes	: +- 1.0	rack travel mm	
Check tolerance cm3/1000s.	: +- 4.0	Rated speed rpm Tolerance 1/min	: 1300
Spreed cm3/1000 strokes	: 5.0	rack travel mm Tolerance mm Rated speed rpm	: +- 0.5
Check tolerance cm3/1000s.	: 9.0		
Rated speed rpm	: 375	LOW IDLE	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes	: + 0.20 : 25.0	control lever position degree tolerance degree Testing:	
Check tolerance cm3/1000s. Spreed cm3/1000 strokes	: +- 5.0	Rated speed rpm rack travel mm Tolerance mm	: 6.5
Check tolerance cm3/1000s.	: 12.0	Rated speed rpm	: 275
(B) SETTING OF IN	JECTION PUMP	CRT mm min. Rated speed rpm	
FULL LOAD DELIVER	Y AT FULL LOAD STOP	TORQUE CONTROL	
Rated speed rpm Aneroid pressure	: 1000	Rated speed rpm rack travel mm Tolerance mm	: 13.8
Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance	: 216.5 : + 1.0	Rated speed rpm rack travel mm Tolerance mm	: 13.30 : + 0.20
cm3/1000s. Spreed	: +- 4.0	+ Rated speed rpm + rack travel mm	: 13.5
cm3/1000 strokes Check tolerance		Tolerance mm	: +- 0.1
cm3/1000s.	: 9.0	ANEROID/ALTITUDE COMPENSATOR TEST	
CONTROL LEVER		SETTING	
control lever position degree tolerance degree	: 120.0 : ← 6.0	Rated speed rpm Pressure hPa	: 1000 : 1200
RATED SPEED		# MEASUREMENT	

rack travel mm Rated speed rpm Tolerance 1/min	
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1300 : 3 - 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1400
LOW IDLE	
control lever position degree tolerance degree	: 69.0 : +- 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 375 : 6.50 : + 0.20
Rated speed rpm	: 275
CRT mm min.	: > 8.10
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.85 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 13.30 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.50 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 1000 : 9.40 : + 0.20	
Rated speed rpm	: 1000	
Pressure hPa rack travel mm Tolerance mm	: 765 : 13.30 : +- 0.20	
Pressure hPa rack travel mm Tolerance mm	: 325 : 10.65 : + 0.05	
START CUT-OUT		
Rated speed rpm Rated speed rpm	: > 100 : < 290	
Check speed 1/min Check speed 1/min	: > 80 : < 300	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 650	
cm3/1000 strokes cm3/1000 strokes Check tolerance	: 208.0 : + 3.0	
cm3/1000S. Spreed	: +- 6.0	
cm3/1000 strokes Check tolerance	: 8.0	
cm3/1000s.	: 12.0	
Aneroid pressure hPa Rated speed rpm	: - : 1000	
Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance	: 96.5 : + 1.0	
cm3/1000s.	: +- 3.0	
RDEAKAWAY		

BREAKAWAY

Rack travel in mm : 12.40
Rated speed rpm : 1165
Tolerance 1/min : + 15

Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 200.0 cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 375

Del. quantity

cm3/1000 strokes : 25.0

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : + 5.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 15.05.96

Test oil

: ISO 4113

Combination No. : 0 402 736 838

Injection pump

Pump designation : PES6P120A120RS7275

EP type number : 0 412 726 886

Governor

Governer design. : RQV400...1250PA964

: -16K

Governer no. : 0 421 815 334

Cust. part No. : 3921918

Customer-spec. information

Customer : CDC Motor : 6BTA-A

Power KW : 119.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance *C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

17.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : Tolerance mm : +-3.60 : ← 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 6.25

: +- 0.50 Tolerance

Check

tolerance 'NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.45

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 153.5
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Rated speed rpm	: 400
Rack travel in mm Tolerance mm Del. quantity	: 6.20 : ← 0.20
cm3/1000 strokes cm3/1000 strokes	: 17.0 : ← 3.0
Check tolerance cm3/1000S.	: ← 5.0
Spreed cm3/1000 strokes	: 4.0
Check tolerance cm3/1000s.	. • 0
ChD7 10003.	: 8.0
(B) SETTING OF IN WITH GOVERNOR	
(B) SETTING OF IN WITH GOVERNOR	
(B) SETTING OF IN WITH GOVERNOR	UECTION PUMP
(B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa	UECTION PUMP
(B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	Y AT FULL LOAD STOP : 1250 : 1200 : 153.5
(B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance	IJECTION PUMP IY AT FULL LOAD STOP : 1250 : 1200 : 153.5 : + 1.0
(B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	Y AT FULL LOAD STOP : 1250 : 1200 : 153.5 : + 1.0 : + 4.0
(B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	Y AT FULL LOAD STOP : 1250 : 1200 : 153.5 : + 1.0 : + 4.0 : 8.0
(B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	Y AT FULL LOAD STOP : 1250 : 1200 : 153.5 : + 1.0 : + 4.0
(B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	Y AT FULL LOAD STOP : 1250 : 1200 : 153.5 : + 1.0 : + 4.0 : 8.0

rack travel mm Rated speed rpm Tolerance 1/min	: 12.40 : 1325 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1675
LOW IDLE	
control lever position degree tolerance degree Testing:	: 71.0 : +- 6.0
Rated speed rpm rack travel mm Tolerance mm	: 400 : 6.20 : +- 0.20
Rated speed rpm	: 300
CRT mm min.	: > 7.70
Rated speed rpm	: 422
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 13.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.80 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.40 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.20 : +- 0.20
ANEROID/ALTITUDE	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

RATED SPEED

Rated speed rpm Pressure hPa	: 1250 : 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 440 : 12.90 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 265 : 11.15 : ← 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 280
Check speed 1/min Check	: > 80
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 900
Del. quantity cm3/1000 strokes cm3/1000 strokes	: 133.5 : + 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
OUTEEU	
cm3/1000 strokes	: 8.0
	: 8.0
cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	
cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 12.0 : -
cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 12.0 : - : 1250 : 110.5

Rack travel in mm : 12.40
Rated speed rpm : 1325
Tolerance 1/min : +- 15

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 13.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 400
Del. quantity
cm3/1000 strokes : 17.0
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 5.0
Spreed
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 14.05.96 Edition Test oil : 14.05.96

Combination No. : 0 402 736 839

Injection pump

Pump designation : PES6P120A120RS7265 EP type number : 0 412 726 882

Governor

Governer design. : RQV350...1100PA964

: -17K

Governer no. : 0 421 815 335

Cust. part No. : 3922424

Customer-spec. information Customer : CDC : 6CTA-A Motor : 167.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : +-4.00 : +- 0.05 Check tolerance mm : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30 Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.25 : +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 13.25 Tolerance mm : +- 0.05

cm3/1000 strokes	: 177.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 375
Rack travel in mm	
Tolerance mm Del. quantity	: +- 0.20
cm3/1000 strokes	: 22.0
cm3/1000 strokes	
Check tolerance	
cm3/1000s.	: ← 5.0
Spreed cm3/1000 strokes	: 8.0
CHIS/ CURL STFOKES	0.11
	. 0.0
Check tolerance cm3/1000s. (B) SETTING OF IN	: 12.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR	: 12.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 12.0 DECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes	: 12.0 NJECTION PUMP TY AT FULL LOAD STOP : 1100 : 1200
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa cm3/1000 strokes cm3/1000 strokes Check tolerance	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0 : +- 1.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 12.0 DECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0 : +- 1.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0 : +- 1.0 : +- 4.0 : 5.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes cm3/1000s. Spreed cm3/1000 strokes cm3/1000s.	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0 : +- 1.0 : +- 4.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0 : +- 1.0 : +- 4.0 : 5.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes cm3/1000s. Spreed cm3/1000 strokes cm3/1000s. Control Lever	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0 : +- 1.0 : +- 4.0 : 5.0
Check tolerance cm3/1000s. (B) SETTING OF IN WITH GOVERNOR FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 12.0 NJECTION PUMP Y AT FULL LOAD STOP : 1100 : 1200 : 199.0 : +- 1.0 : +- 4.0 : 5.0

rack travel mm Rated speed rpm Tolerance 1/min	: 11.90 : 1260 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1385 : - 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1450
LOW IDLE	
control lever position degree tolerance degree	: 72.0 : + 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 375 : 6.40 : ← 0.20
Rated speed rpm	: 275
CRT mm min.	: > 7.90
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.40 : +- 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 13.00 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1100 : 1200
MEASUREMENT	

Pressure hPa	: -
Rated speed rpm	: 1100
rack travel mm	: 8.70
Toleranse mm	: + 0.20
Rated speed rpm	: 1100
Pressure hPa	: 520
rack travel mm	: 11.80
Tolerance mm	: + 0.20
Pressure hPa	: 255
rack travel mm	: 9.75
Tolerance mm	: ← 0.05

START CUT-OUT

Rated speed rpm Rated speed rpm	: >	100 290
Check speed 1/min Check	; >	80
speed 1/min	: <	300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa	:	1200
Rated speed rpm	:	650
Del. quantity cm3/1000 strokes	:	188.0
cm3/1000 strokes	:	+- 3.0
Check tolerance cm3/1000s.	:	+- 6.0
Spreed		
cm3/1000 strokes	:	8.0
Check tolerance cm3/1000s.	:	12.0

Aneroid	pressure
	•

Ariero la pressure			
hPa	:		-
Rated speed rpm	:	1	100
Del. quantity			
cm3/1000 strokes	:		88.0
cm3/1000 strokes	:	+	1.0
Check tolerance			
cm3/1000s.	:	+-	3.0

BREAKAWAY

Rack travel in mm	:	11.90
Rated speed rpm	:	1260
Tolerance 1/min	:	+- 15

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	12.50
Tolerance mm	: +	- 0.50
Del. quantity		
cm3/1000 strokes	:	215.0
cm3/1000 strokes	: +	- 20.0
Check tolerance		
cm3/1000s.	: +	- 25.0

LOW IDLE

Rated speed rpm	: 3	375
Del. quantity		
cm3/1000 strokes	:	22.0
cm3/1000 strokes	; +-	3.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0
		_

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.05.96 : ISO 4113

Combination No. : 0 402 736 840

Injection pump

Pump designation : PES6P12OA12ORS7265 EP type number : 0 412 726 882

Governor

Governer design. : RQV350...1100PA964

: -18K

Governer no.

: 0 421 815 336

Cust. part No. : 3922426

Customer-spec. information : CDC Customer Motor : 6CTA-A Power KW : 157.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.25

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.85

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes	
CHO/ TOUG SCHOKES	: 187.5
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000S.	: 9.0
Rated speed rpm	: 375
Rack travel in mm Tolerance mm Del. quantity	: 6.60 : + 0.20
cm3/1000 strokes cm3/1000 strokes Check tolerance	: 23.0 : +- 3.0
cm3/1000s. Spreed	: +- 5.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
(B) SETTING OF IN WITH GOVERNOR	
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	Y AT FULL LOAD STOP : 1100 : 1200 : 187.5 : + 1.0 : + 4.0 : 5.0
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1200 : 187.5 : + 1.0 : + 4.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	: 1100 : 1200 : 187.5 : + 1.0 : + 4.0 : 5.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1200 : 187.5 : + 1.0 : + 4.0 : 5.0 : 9.0

rack travel mm Rated speed rpm Tolerance 1/min	: 11.70 : 1265 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	: 1385
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : ← 0.50 : 1450
LOW IDLE	
control lever position degree tolerance degree	: 68.0 : +- 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 375 : 6.60 : + 0.20
Rated speed rpm	: 275
CRT mm min.	: > 7.90
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.85 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 11.70 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 12.80 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1100 : 1200
MEASUREMENT	

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 8.90 : + 0.20
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 520 : 11.70 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 255 : 9.75 : ← 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min Check	: > 80
speed 1/min	: < 300
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 650 : 169.5
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s. Spreed	: +- 6.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
Aneroid pressure hPa Rated speed rpm	: – : 1100
Del. quantity cm3/1000 strokes	: 91.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: ← 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 11.70 : 1265 : + 15

STARTING FUEL DELIVERY

Rated speed rpm	: 100
rack travel mm	: 11.00
Tolerance mm	: ← 0.50
Del. quantity	
cm3/1000 strokes	: 180.0
cm3/1000 strokes	: +- 20.0
Check tolerance	
cm3/1000s.	: +- 25.0

LOW IDLE

Rated speed rpm Del. quantity	:	375	
cm3/1000 strokes cm3/1000 strokes Check tolerance	: : +-	23.0 3.0	
cm3/1000s. Spreed	: +-	5.0	
cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 841

Injection pump

Pump designation : PES6P120A12CRS7275 EP type number : 0 412 726 886

Governor

Governer design. : RQV400...1250PA964

: -19K : 0 421 815 342 Governer no.

Cust. part No. : 3921920

Customer-spec. information Customer : CDC : 6BTA-A Motor Power KW : 130.5

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

Tolerance °C : +-

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.25

Tolerance : \leftarrow 0.50 Check

tolerance *NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.45

Tolerance mm : \leftarrow 0.05

		+
Del. quantity cm3/1000 strokes	: 160.5	+
cm3/1000 strokes	: +- 1.0	‡
Check tolerance cm3/1000s.	; + 4.0	† † †
Spreed cm3/1000 strokes	: 8.0	†
Check tolerance cm3/1000s.	: 12.0	Ŧ
Rated speed rpm	: 400	† †
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 6.10 : + 0.20 : 17.0	† † † †
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 3.0 : +- 5.0	+++++++++++++++++++++++++++++++++++++++
Spreed cm3/1000 strokes Check tolerance	: 4.0	†
cm3/1000s.	: 8.0	1
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	† + + + +
FULL LOAD DELIVER	Y AT FULL LOAD STOP	1
Rated speed rpm Aneroid pressure	: 1250	+
hPa Del. quantity	: 1200	‡
cm3/1000 strokes cm3/1000 strokes Check tolerance	: 160.5 : + 1.0	‡
cm3/1000s. Spreed	: +- 4.0	‡
cm3/1000 strokes Check tolerance	: 8.0	‡
cm3/1000s.	: 12.0	<u>†</u>
CONTROL LEVER		+
control lever position degree tolerance degree	: 117.0 : + 6.0	†
RATED SPEED		‡

rack travel mm Rated speed rpm Tolerance 1/min	: 12.40 : 1315 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
LOW IDLE	
control lever position degree tolerance degree	: 71.0 : + 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 6.10 : + 0.20
Rated speed rpm	: 300
CRT mm min.	: > 7.40
Rated speed rpm	: 422
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 13.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.50 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.10 : + 0.10

SETTING

Rated speed rpm Pressure hPa	: 1250 : 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 430 : 13.00 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 260 : 11.35 : ← 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 280
Check speed 1/min Check	: > 80
speed 1/min	: < 290
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: 1200 : 900
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes	: 900 : 13 <u>8</u> .0
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 900 : 13 <u>8</u> .0
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	: 900 : 138.0 : + 3.0
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 900 : 138.0 : + 3.0 : + 6.0
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	: 900 : 138.0 : + 3.0 : + 6.0 : 8.0 : 12.0
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure iPa Rated speed rpm Del. quantity	: 900 : 138.0 : + 3.0 : + 6.0 : 8.0 : 12.0 :
Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure inPa Rated speed rpm	: 900 : 138.0 : + 3.0 : + 6.0 : 8.0 : 12.0

Rack travel in mm : 12.40
Rated speed rpm : 1315
Tolerance 1/min : + 15

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 13.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 155.0
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 400
Del. quantity
cm3/1000 strokes : 17.0
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 5.0
Spreed
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15,05,96 : ISO 4113

Combination No. : 0 402 736 842

Injection pump

Pump designation : PES6P120A120RS7281 EP type number : 0 412 725 890

Governor

Governer design. : RQV400...1250PA1060

: -1K

Governer no.

: 0 421 815 344

Cust. part No. : 3925085

Customer-spec. information Customer : CDC Motor : 6BTA-A Power KW : 119.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 : **←** 1.5 Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.60 : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 6.25 : +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.35

Tolerance mm: $\leftarrow 0.05$

Del. quantity cm3/1000 strokes	: 153.5
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Rated speed rpm	: 420
Rack travel in mm Tolerance mm Del. quantity	: 6.00 : ← 0.20
cm3/1000 strokes cm3/1000 strokes	: 15.5 : ← 3.0
Check tolerance cm3/1000s.	: +- 5.0
Spreed cm3/1000 strokes	: 4.0
Check tolerance cm3/1000s.	: 8.0
	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure hPa	4000
Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance	: 1200 : 153.5 : +- 1.0
cm3/1000s. Spreed	: ← 4.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
CONTROL LEVER	
control lever position degree tolerance degree	: 120.0 : + 6.0

rack travel mm Rated speed rpm Tolerance 1/min	: 12.30 : 1325 : + 15
rack travel mm Rated speed rpm Tolerance 1/min	
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1550
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : +- 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 420 : 6.00 : +- 0.20
Rated speed rpm	: 300
CRT mm min.	: > 7.70
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 13.35 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 12.00 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.60 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.40 : +- 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	

SETTING

RATED SPEED

Rated speed rpm Pressure hPa	: 1250 : 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1250 : 10.40 : +- 0.20
Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 350 : 12.70 : ← 0.30
Pressure hPa rack travel mm Tolerance mm	: 265 : 11.80 : + 0.20
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 280
Check speed 1/min Check	: > 80
speed 1/min	; < 290
FUEL DELIVERY CHA	
Aneroid pressure hPa Rated speed rpm	: 1200 : 800
Del. quantity cm3/1000 strokes cm3/1000 strokes	
Check tolerance cm3/1000s.	: +- 6.0
Spreed cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
Aneroid pressure hPa	: -
Detect speed spm	: 1250
Rated speed rpm Del. quantity	40/ 5
	: 106.0 : + 2.0

Rack travel in mm : 12.30
Rated speed rpm : 1325
Tolerance 1/min : + 15

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 13.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 155.0 cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 420
Del. quantity
cm3/1000 strokes : 15.5
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 5.0
Spreed
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 15.05.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 736 845

Injection pump

Pump designation : PES6P120A120RS7286 EP type number : 0 412 726 894

Governor

Governer design. : RQV350...1100PA964

: -20K

: 0 421 815 352 Governer no.

Cust. part No. : 3922425

Customer-spec. information Customer : CDC : 6CTA-A Motor Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

: 40 temp. °C Tolerance *C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

: + 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.25 Tolerance : + 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 15.25 Tolerance mm : +- 0.05

Del. quantity	
cm3/1000 strokes	: 243.5
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 375
Rack travel in mm	o : 6.60
Tolerance mm	: ← 0.20
Del. quantity cm3/1000 strokes	: 24.0
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s.	: +- 5.0
Spreed	0.0
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
FILL LOAD NELTVER	Y AT FULL LOAD STOP
	Y AT FULL LOAD STOP
FULL LOAD DELIVER Rated speed rpm Aneroid pressure	Y AT FULL LOAD STOP : 1100
Rated speed rpm Aneroid pressure hPa	
Rated speed rpm Aneroid pressure hPa Del. quantity	: 1100 : 1200
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 1100 : 1200 : 243.5
Rated speed rpm Aneroid pressure hPa Del. quantity	: 1100 : 1200
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1200 : 243.5
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	: 1100 : 1200 : 243.5 : + 1.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0 : 5.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0 : 5.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0 : 5.0 : 9.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0 : 5.0 : 9.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0 : 5.0 : 9.0
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1200 : 243.5 : + 1.0 : + 4.0 : 5.0 : 9.0

rack travel mm Rated speed rpm Tolerance 1/min	
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1400 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1500
LOW IDLE	
control lever position degree tolerance degree	: 72.0 : +- 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 375 : 6.60 : + 0.20
Rated speed rpm	: 275
CRT mm min.	: > 7.80
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 15.25 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 13.40 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 14.70 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.70 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	

Rated speed rpm Pressure hPa	: 1100 : 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 715 : 13.50 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 335 : 10.60 : + 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min Check	: > 80
speed 1/min	: < 300
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	: 1200
Rated speed rpm Del. quantity	
cm3/1000 strokes cm3/1000 strokes	
Chack talananca	: - 3.0
Check tolerance cm3/1000s.	: + 6.0
cm3/1000s. Spreed cm3/1000 strokes	
cm3/1000s. Spreed	: +- 6.0
cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: + 6.0 : 8.0 : 12.0
cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: +- 6.0 : 8.0 : 12.0 : - : 500
cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: + 6.0 : 8.0 : 12.0

Rack travel in mm : 13.60
Rated speed rpm : 1255
Tolerance 1/min : + 15

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 11.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 180.0
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 375

Del. quantity
cm3/1000 strokes : 24.0
cm3/1000 strokes : + 3.0

Check tolerance
cm3/1000s. : + 5.0

Spreed
cm3/1000 strokes : 8.0

Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.05.96 : ISO 4113

Combination No. : 0 402 736 851

Injection pump

Pump designation : PES6P120A120RS7332

EP type number

: 0 412 726 909

Governor

Governer design.

: RQV350...1000PA964

: -24K

Governer no.

: 0 421 815 411

Cust. part No. : 3927924

Customer-spec. information : CDC Customer Motor : 6CTA-A : 205.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C 2.0

: 2 417 413 093 Overflow valve

2.0 Inlet press. bar : Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 4.00 : +- 0.05 Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

: +- 0.75 tolerance *NW

Start of delivery blocking

"NW after s.o.d. : 5.50

: +- 0.50 Tolerance Check

tolerance *NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 15.15

7.1	t
Tolerance mm : +- 0.05	t control lever
Del. quantity	position degree : 118.0
cm3/1000 strokes : 235.0	tolerance degree : +- 6.0
cm3/1000 strokes : +- 1.0	+ + RATED SPEED
Chis/ 1000 Strokes : +- 1.0	T RATED SPEED
Check tolerance -	rack travel mm : 13.50
cm3/1000s. : +- 4.0	+ Rated speed rpm : 1155 + Tolerance 1/min : +- 15
Spreed	- Toterance Minn . + 13
cm3/1000 strokes : 5.0 -	rack travel mm : 4.00
Charle to Language	+ Rated speed rpm : 1300 - Tolerance 1/min : +- 5
Check tolerance - cm3/1000s. : 9.0 -	+ Tolerance 1/min : +- 5 +
-	rack travel mm : 0.50
Rated speed rpm : 375	Tolerance mm : + 0.50
Del. quantity -	Rated speed rpm : 1400
cm3/1000 strokes : 27.0 -	
cm3/1000 strokes : +- 3.0	
Check tolerance	LOW IDLE
cm3/1000s. : +- 5.0 - Spreed -	<u>†</u>
cm3/1000 strokes : 8.0	control lever
Check tolerance -	position degree : 70.0
cm3/1000s. : 12.0 -	tolerance degree : +- 6.0
	Testing:
(B) SETTING OF INJECTION PUMP	Testing.
WITH GOVERNOR	Rated speed rpm : 275
7	CRT mm min. :> 8.20
	t cki mm min. : > 0.20
GUIDE SLEEVE POSITION	Rated speed rpm : 425
2270	+
Rated speed rpm : 1230	TORQUE CONTROL
Rack travel in mm: 13.50	TONGOL GONTHOL
÷	Rated speed rpm : 1000
FILL LOAD DELTUEDY AT FULL LOAD CTOD	rack travel mm : 15.15 Tolerance mm : +- 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.05
Rated speed rpm : 1000	Rated speed rpm : 650
Aneroid pressure	rack travel mm : 13.70
hPa : 1200 -	Tolerance mm : +- 0.20
Del. quantity - cm3/1000 strokes : 235.0 -	Rated speed rpm : 1100
cm3/1000 strokes : +- 1.0	rack travel mm : 14.60
Check tolerance	Tolerance mm : +- 0.10
cm3/1000s. : +- 4.0	
Spreed	ANEDOTO / ALTITUDE
cm3/1000 strokes : 5.0 - Check tolerance -	- ANEROID/ALTITUDE - COMPENSATOR TEST
cm3/1000s. : 9.0	-
+	
	- SETTING
CONTROL LEVER	Rated speed rpm : 1000
 	- Pressure hPa : 1200

MEASUREMENT

Pressure hPa : Rated speed rpm : 1000
rack travel mm : 9.70
Tolerance mm : + 0.20

Rated speed rpm : 1000

Pressure hPa : 825 rack travel mm : 13.80 Tolerance mm : +- 0.20

Pressure hPa : 370
rack travel mm : 11.15
Tolerance mm : + 0.05

START CUT-OUT

Rated speed rpm : > 100 Rated speed rpm : < 290

Check

speed 1/min : > 80

Check

speed 1/min : < 300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 hPa Rated speed rpm 650 Del. quantity cm3/1000 strokes : 210.5 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed 8.0 cm3/1000 strokes : Check tolerance cm3/1000S. 12.0

Aneroid pressure

hPa : Rated speed rpm : 1000
Del. quantity
cm3/1000 strokes : 99.0
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 3.0

BREAKAWAY

Rack travel in mm : 13.50 Rated speed rpm : 1155 Tolerance 1/min : +- 15

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 11.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 180.0 cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 375 Del. quantity cm3/1000 strokes : 27.0 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.: +-5.0 Spreed cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.05.96 : ISO 4113

Combination No. : 0 402 736 852

Injection pump

Pump designation : PES6P120A120RS7332

EP type number : 0 412 726 909

Governor

Governer design. : RQV350...900PA964

: -25K

Governer no. : 0 421 815 418

Cust. part No. : 3927923

Customer-spec. information Customer : CDC : 6CTA-A Motor Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter :

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 4.00 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 : +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 15.25

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 239.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000S.	: 9.0
Rated speed rpm	: 375
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 7.00 : + 0.10 : 27.0
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 3.0 : +- 5.0
Spreed cm3/1000 strokes	: 8.0
Check tolerance cm3/1000S.	: 12.0
Rated speed rpm Aneroid pressure hPa Del. quantity	AT FULL LOAD STOP : 900 : 1200
cm3/1000 strokes cm3/1000 strokes	: 239.0 : + 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
CONTROL LEVER	
CONTROL LEVER control lever position degree tolerance degree	: 119.0 : +- 6.0

rack travel mm Rated speed rpm Tolerance 1/min	: 13.90 : 1075 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1230 : - 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1400
LOW IDLE	
control lever position degree tolerance degree	: 70.0 : +- 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 375 : 7.00 : + 0.10
Rated speed rpm	: 275
CRT mm min.	: > 8.10
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 900 : 15.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 14.35 : +- 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 15.00 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 900 : 1200

MEASUREMENT

RATED SPEED

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 900 : 9.70 : + 0.20
Rated speed rpm	: 900
Pressure hPa rack travel mm Tolerance mm	: 825 : 13.80 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 370 : 11.15 : +- 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min Check	: > 80
speed 1/min	: < 300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa 1200 Rated speed rpm 650 Del. quantity cm3/1000 strokes : 226.5 cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. 12.0

Aneroid pressure
hPa : Rated speed rpm : 1000
bel. quantity
cm3/1000 strokes : 99.0
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 3.0

BREAKAWAY

Rack travel in mm : 13.90
Rated speed rpm : 1075
Tolerance 1/min : +- 15

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 11.40 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 25.0

LOW IDLE

375 Rated speed rpm Del. quantity cm3/1000 strokes : 27.0 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.5.0 Spreed cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 873

Injection pump

Pump designation : PES6P12OA12ORS7265 EP type number : 0 412 726 924

Governor

Governer design. : RQV350...1100PA1178K

Governer no. : 0 421 815 444

Cust. part No. : 3928152

Customer-spec. information
Customer : CDC
Motor : 6CTA-A
Power KW : 167.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance "NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.25 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.25 Tolerance mm : + 0.05

Del. quantity	400.0	+
cm3/1000 strokes		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: +- 1.0	Rated speed rpm : 1100
Check tolerance cm3/1000S.	: +- 4.0	+ Aneroid pressure + hPa : 1200 + Del. quantity
Spreed cm3/1000 strokes	: 5.0	+ cm3/1000 strokes : 199.0 + cm3/1000 strokes : +- 1.0 + Check tolerance
Check tolerance cm3/1000s.	: 9.0	cm3/1000s. : + 4.0 - Spreed
Rated speed rpm	: 350	- cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0
Rack travel in mn Tolerance mm Del. quantity		CONTROL LEVER
cm3/1000 strokes		+
cm3/1000 strokes Check tolerance	: +- 3.0	<pre>+ control lever + position degree : 115.0</pre>
cm3/1000s. Spreed	: +- 5.0	tolerance degree : +- 6.0
cm3/1000 strokes Check tolerance	: 8.0	RATED SPEED
cm3/1000s.	: 12.0	rack travel mm : 11.90 Rated speed rpm : 1265
(B) SETTING OF IN	JECTION PUMP	Tolerance 1/min : + 15
WITH GOVERNOR		+ rack travel mm : 4.00 + Rated speed rpm : 1385 + Tolerance 1/min : +- 5
GUIDE SLEEVE TRAV	/EL	+
Rated speed rpm guide sleeve		+ rack travel mm : 0.50 + Tolerance mm : + 0.50 + Rated speed rpm : 1450
travel mm Tolerance mm	: 2.11 : + 0.20	<u> </u>
Rated speed rpm guide sleeve	: 1159	LOW IDLE
travel mm Tolerance mm	: 7.79 : +- 0.15	control lever position degree : 70.0
Rated speed rpm guide sleeve	: 726	tolerance degree : + 6.0
travel mm Tolerance mm	: 4.80 : +- 0.20	Testing:
Rated speed rpm guide sleeve	: 420	Rated speed rpm : 350 rack travel mm : 6.40 Tolerance mm : + 0.20
travel mm Tolerance mm	: 3.10 : +- 0.25	Rated speed rpm : 275
Rated speed rpm	: 1640	CRT mm min. : > 7.90
guide sleeve travel mm Tolerance mm	: 13.50 : +- 0.50	Rated speed rpm : 425

TORQUE CONTROL	
Rated speed rpm	: 1100
rack travel mm	: 13.25
Tolerance mm	: ← 0.05
Rated speed rpm	: 650
rack travel mm	: 12.40
Tolerance mm	: ← 0.20
Rated speed rpm	: 1200
rack travel mm	: 13.00
Tolerance mm	: +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 1100
Pressure hPa	: 1200
MEASUREMENT	
Pressure hPa	: -
Rated speed rpm	: 1100
rack travel mm	: 8.70
Tolerance mm	: +- 0.20
Rated speed rpm	: 1100
Pressure hPa	: 520
rack travel mm	: 11.80
Tolerance mm	: + 0.20
Pressure hPa	: 255
rack travel mm	: 9.75
Tolerance mm	: + 0.05
START CUT-OUT	
Rated speed rpm	: > 100
Rated speed rpm	: < 290
Check speed 1/min Check	: > 80
speed 1/min	: < 300
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	: 1200
1Pa	: 650

Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: 188.0 : + 3.0 : + 6.0 : 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: - : 1100 : 88.0 : + 1.0 : + 3.0
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1265
STARTING FUEL DEL: Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 12.50 : + 0.50 : 215.0 : + 20.0 : + 25.0
LOW IDLE Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 350 : 22.0 : + 3.0 : + 5.0 : 8.0 : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 875

Injection pump

Pump designation : PES6P120A120RS7352 EP type number : 0 412 726 923

Governor

Governer design. : RQV350...1000PA1185K

Governer no. : 0 421 815 446

Cust. part No. : 3928169

Customer-spec. information Customer : CDC Motor : 6CTA-A

Power KW

: 205.1

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm :

4.00

Tolerance mm

: +- 0.05

Check

tolerance mm

: +- 0.10

Rack travel in mm: 10.50

Tolerance mm

: +- 1.50

Firing order

: 1-5- 3- 6- 2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.30

Check

tolerance °NW

: **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50

Tolerance

: +- 0.50

Check

tolerance "NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 15.15

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 235.0
cm3/1000 strokes	: + 1.0
CMS/ FOCAL STROKES	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 375
Rack travel in mm Tolerance mm Del. quantity	: 6.80 : ← 0.10
cm3/1000 strokes cm3/1000 strokes	: 27.0 : + 3.0
Check tolerance cm3/1000s.	: +- 5.0
Spreed cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP
FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa	AT FULL LOAD STOP : 1000 : 1200
FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes	AT FULL LOAD STOP
FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	AT FULL LOAD STOP : 1000 : 1200 : 235.0
WITH GOVERNOR FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	(AT FULL LOAD STOP : 1000 : 1200 : 235.0 : + 1.0 : + 4.0
WITH GOVERNOR FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	(AT FULL LOAD STOP : 1000 : 1200 : 235.0 : + 1.0 : + 4.0 : 5.0
WITH GOVERNOR FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	(AT FULL LOAD STOP : 1000 : 1200 : 235.0 : + 1.0 : + 4.0

rack travel mm Rated speed rpm Tolerance 1/min	: 13.50 : 1155 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	: 8.00 : 1245 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1350
LOW IDLE	
control lever position degree tolerance degree	: 71.0 : + 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 375 : 6.80 : + 0.10
Rated speed rpm	: 275
CRT mm min.	: > 8.20
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 15.15 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 13.70 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 14.60 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	

SETTING

MEASUREMENT

Rated speed rpm : 1000 Pressure hPa : 1200

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1000 : 9.90 : +- 0.20
Rated speed rpm	: 1000
Pressure hPa rack travel mm Tolerance mm	: 825 : 14.10 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 370 : 11.45 : + 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min	: > 80
Check speed 1/min	: < 300
hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance	: 1200 : 650 : 210.5 : + 3.0
cm3/1000s. Spreed	: +- 6.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
Aneroid pressure hPa Rated speed rpm	: - : 1000
Del. quantity cm3/1000 strokes cm3/1000 strokes	: 103.5 : + 2.0
Check tolerance cm3/1000s.	: +- 4.0
BREAKAWAY	
Rack travel in mm	: 13.50 : 1155

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	11.50
Tolerance mm	: +-	0.50
Del. quantity		
cm3/1000 strokes	:	180.0
cm3/1000 strokes	: +-	20.0
Check tolerance		
cm3/1000s.	: +-	25.0

LOW IDLE

Rated speed rpm	:	375	
Del. quantity			
cm3/1000 strokes	:	27.0	
cm3/1000 strokes	: +-	3.0	
Check tolerance			
cm3/1000s.	: +-	5.0	
Spreed			
cm3/1000 strokes	:	8.0	
Check tolerance			
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 876

Injection pump

Pump designation : PES6P120A120RS7353 EP type number : 0 412 726 924

Governor

Governer design. : RQV350...1100PA1186K

Governer no. : 0 421 815 447

Cust. part No. : 3928670

Customer—spec. information
Customer : CDC
Motor : 6CTA-A
Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.00
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.95

Tolerance mm : \leftarrow 0.05

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Del. quantity cm3/1000 strokes	: 211.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 350
Rack travel in mm Tolerance mm Del. quantity	: 6.80 : ← 0.20
cm3/1000 strokes cm3/1000 strokes	: 23.5 : + 3.0
Check tolerance cm3/1000s.	: +- 5.0
Spreed cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
(B) SETTING OF IN. WITH GOVERNOR FULL LOAD DELIVER	JECTION PUMP Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1100
hPa	: 1200
Del. quantity cm3/1000 strokes cm3/1000 strokes	: 211.0 : + 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 115.0 : +- 6.0

rack travel mm Rated speed rpm Tolerance 1/min	
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1360 : +- 5
rack traval mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1385
LOW IDLE	
control lever position degree tolerance degree	: 70.0 : + 6.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.80 : +- 0.20
Rated speed rpm	: 275
CRT mm min.	: > 7.80
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.95 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.20 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 13.70 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	

Rated speed rpm : 1100 Pressure hPa : 1200

MEASUREMENT

Pressure hPa	• -	
Rated speed rpm	1100	
rack travel mm	: 8.90	
Tolerance mm	: +- 0.20	
Rated speed rpm	: 1100	
Pressure hPa	: 650	
rack travel mm	: 12.70	
Tolerance mm	: +- 0.20	
Pressure hPa	: 310	
rack travel mm	: 10.15 : +- 0.05	
Tolerance mm	: +- 0.05	
START CUT-OUT		
Rated speed rpm	: > 100	
Rated speed rpm	: < 290	
Check		
speed 1/min	: > 80	
Check		
A /- *	700	
	: < 300 RACTERISTICS	
speed 1/min FUEL DELIVERY CHA Aneroid pressure	RACTERISTICS	
FUEL DELIVERY CHA Aneroid pressure hPa	RACTERISTICS : 1200	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	RACTERISTICS : 1200	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	RACTERISTICS : 1200 : 650	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 650 : 172.5	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes	RACTERISTICS : 1200 : 650	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance	: 1200 : 650 : 172.5 : + 3.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 650 : 172.5 : + 3.0 : + 6.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	: 1200 : 650 : 172.5 : + 3.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 650 : 172.5 : + 3.0 : + 6.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0 : 12.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0 : 12.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0 : 12.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0 : 12.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000strokes Check tolerance cm3/1000strokes Check tolerance cm3/1000strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0 : 12.0 : - 12.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes cm3/1000 strokes	: 1200 : 650 : 172.5 : + 3.0 : + 6.0 : 8.0 : 12.0 : - 12.0	

STARTING FUEL DELIVERY	ST	ART	TNG	FUFI	DFI	TVFRY
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Rated speed rpm	:		100
rack travel mm	:		11.50
Tolerance mm	:	+-	0.50
Del. quantity			
cm3/1000 strokes	:		185.0
cm3/1000 strokes	:	+-	20.0
Check tolerance			
cm3/1000s.	:	+-	25.0

LOW IDLE

:		350
:		23.5
:	+-	3.0
:	+	5.0
:		8.0
:		12.0
	•	: : +- : +-

End of test specification sheet

Rack travel in mm : 12.60
Rated speed rpm : 1220
Tolerance 1/min : + 15

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 877

Injection pump

Pump designation : PES6P120A120RS7353 EP type number : 0 412 726 924

Governor

Governer design. : RQV350...1100PA1187K

Governer no. : 0 421 815 448

Cust. part No. : 3928672

Customer-spec. information Customer : CDC Motor : 6CTA-A

Power KW

: 167.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : + 2.0 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.25 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no.

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 13.25 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 201.0	+ rack travel mm + Rated speed rpm + Tolerance 1/min	: 12.00 : 1205 : +- 15
cm3/1000 strokes	: +- 1.0	+	
Check tolerance cm3/1000S.	: + 4.0	rack travel mm Rated speed rpm Tolerance 1/min	
Spreed cm3/1000 strokes	: 5.0	rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1450
Check tolerance cm3/1000s.	: 9.0	+	
Rated speed rpm	: 350	LOW IDLE	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: + 0.20 : 22.0	control lever position degree tolerance degree	
cm3/1000 strokes Check tolerance	: + 3.0	+ Testing:	
cm3/1000S. Spreed cm3/1000 strokes	: + 5.0 : 8.0	Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.40 : + 0.20
Check tolerance cm3/1000S.	: 12.0	Rated speed rpm	: 275
		CRT mm min.	: > 7.90
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	Rated speed rpm	: 425
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	TORQUE CONTROL	
Rated speed rpm Aneroid pressure	: 1100	Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.25 : + 0.05
hPa Del. quantity cm3/1000 strokes cm3/1000 strokes	: 1200 : 201.0 : + 1.0	Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.40 : + 0.20
Check tolerance cm3/1000S. Spreed	: ← 4.0	Rated speed rpm	: 1150 : 13.10
cm3/1000 strokes Check tolerance	: 5.0	rack travel mm Tolerance mm	: +- 0.10
cm3/1000s.	: 9.0	ANEROID/ALTITUDE COMPENSATOR TEST	······································
CONTROL LEVER		+ + SETTING	
control lever position degree tolerance degree		Rated speed rpm Pressure hPa rack travel mm	: 1100 : 1200 : 13.25
RATED SPEED		Tolerance mm	: +- 0.05

MEASUREMENT

Pressure hPa	:	_
Rated speed rpm	:	1100
rack travel mm	:	8.70
Tolerance mm	; ⊣	- 0.20

Rated	speed	rpm	:	1100
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Pressure hPa	:	520
rack travel mm	:	11.80
Tolerance mm	; +	- 0.20

Pressure hPa	:	255
rack travel mm	:	9.75
Tolerance mm	: +	- 0.05

START CUT-OUT

Rated	speed	rpm	; >	100
Rated	speed	rpm	: <	290

Check

speed 1/min	; >	80
Check speed 1/min	: <	300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Anter a rai bracara		
hPa	:	1200
Rated speed rpm	:	650
Del. quantity		
cm3/1000 strokes	:	190.5
cm3/1000 strokes	:	+- 3.0
Check tolerance		
cm3/1000s.	:	← 6.0
Spreed		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Aneroid pressure

hPa	:		-
Rated speed rpm	:	1	100
Del. quantity			
cm3/1000 strckes	:		91.0
cm3/1000 strokes	:	+-	1.0
Check tolerance			
cm3/1000s.	:	+-	3.0

BREAKAWAY

Rack travel in mm	:	12.00
Rated speed rpm	:	1205
Tolerance 1/min	:	+- 15

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		11.10
Tolerance mm	:	≠-	0.50
Del. quantity			
cm3/1000 strokes	:		180.0
cm3/1000 strokes	:	+	20.0
Check tolerance			
cm3/1000s.	:	+-	25.0

LOW IDLE

Rated speed rpm Del. quantity	: 350	
cm3/1000 strokes cm3/1000 strokes	: 22.0 : + 3.0	
Check tolerance cm3/1000s.	: +- 5.0	
Spreed cm3/1000 strokes Check tolerance	: 8.0	
cm3/1000s.	: 12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.05.96 : ISO 4113

Combination No. : 0 402 736 895

Injection pump

Pump designation: PES6P120A120RS7353

EP type number : 0 412 726 924

Governor

Governer design. : RQV350...1100PA1176

: -1K

Governer no. : 0 421 815 496

Cust. part No. : 3930611

Customer-spec. information Customer : CDC : 6CTA-A Motor

Power KW

: 186.5

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

: 1 680 750 015 Test lines

Outside diameter :

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 4.00 : +- 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 : +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.95 Tolerance mm : \leftarrow 0.05

	+ Tolerance mm : +- 0.50
Del. quantity cm3/1000 strokes : 211.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : + 1.0	Rated speed rpm : 1100
Check tolerance cm3/1000s. : + 4.0	Aneroid pressure hPa : 1200 Del. quantity
Spreed cm3/1000 strokes : 5.0	- cm3/1000 strokes : 211.0 - cm3/1000 strokes : +- 1.0 - Check tolerance
Check tolerance cm3/1000s. : 9.0	+ cm3/1000s. : +- 4.0 + Spreed + cm3/1000 strokes : 5.0
Rated speed rpm : 375	Check tolerance cm3/1000s. : 9.0
Rack travel in mm : 6.70	1
Tolerance mm : + 0.20 Del. quantity	CONTROL LEVER
cm3/1000 strokes : 23.5	+
cm3/1000 strokes : + 3.0	+ control lever
Check tolerance cm3/1000s. : +- 5.0	<pre>position degree : 118.0 tolerance degree : + 6.0</pre>
Spreed	+
cm3/1000 strokes : 8.0 Check tolerance	+ RATED SPEED
cm3/1000s. : 12.0	rack travel mm : 12.40 Rated speed rpm : 1280
(B) SETTING OF INJECTION PUMP	† Tolerance 1/min : +- 15
WITH GOVERNOR	rack travel mm : 8.00 Rated speed rpm : 1345
GUIDE SLEEVE TRAVEL	Tolerance 1/min : +- 5
Rated speed rpm : 350	rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm : 2.28	Rated speed rpm : 1460
Tolerance mm : + 0.25	-
Rated speed rpm : 1282 guide sleeve	LOW IDLE
travel mm : 9.01	†
Tolerance mm : + 0.25	control leverposition degree : 70.0
Rated speed rpm : 452 guide sleeve	+ tolerance degree : +- 6.0
travel mm : 3.50	+ Testing:
Tolerance mm : + 0.25	+ Rated speed rpm : 375
Rated speed rpm : 402 guide sleeve	rack travel mm : 6.70 Tolerance mm : +- 0.20
travel mm : 2.91 Tolerance mm : + 0.25	Rated speed rpm : 275
Rated speed rpm : 1640	CRT mm min. :> 8.20
guide sleeve travel mm : 13.50	Rated speed rpm : 425

TORQUE CONTROL		Aneroid pressure hPa : 1200
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.95 : +- 0.05	+ Rated speed rpm : 750 + Del. quantity + cm3/1000 strokes : 173. + cm3/1000 strokes : + 3.
Rated speed rpm rack travel mm Tolerance mm		+ Check tolerance + cm3/1000s. : +- 6. + Spreed + cm3/1000 strokes : 8.
Rated speed rpm rack travel mm Tolerance mm		Check tolerance cm3/1000s. : 12.
Rated speed rpm rack travel mm Tolerance mm	: 12.30	hPa : - Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 92. cm3/1000 strokes : + 1. Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000s. : + 4.
SETTING		+ BREAKAWAY +
Rated speed rpm Pressure hPa	: 1100 : 1200	Rack travel in mm : 12.4 Rated speed rpm : 1280
		⊥ Tolerance 1/min · + 1
MEASUREMENT		+ Tolerance 1/min : +- 1
Pressure hPa Rated speed rpm rack travel mm		STARTING FUEL DELIVERY Rated speed rpm : 100
MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 9.30	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.8 Tolerance mm : + 0.5
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 9.30 : ← 0.20	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.8 Tolerance mm : + 0.5 Del. quantity cm3/1000 strokes : 185. cm3/1000 strokes : + 20. Check tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 9.30 : ← 0.20 : 1100 : 650 : 13.00 : ← 0.20 : 310 : 10.70	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.8 Tolerance mm : + 0.5 Del. quantity cm3/1000 strokes : 185. cm3/1000 strokes : + 20. Check tolerance cm3/1000s. : + 25.
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 9.30 : ← 0.20 : 1100 : 650 : 13.00 : ← 0.20 : 310 : 10.70	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.8 Tolerance mm : + 0.5 Del. quantity cm3/1000 strokes : 185. cm3/1000 strokes : + 20. Check tolerance cm3/1000s. : + 25.
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 9.30 : ← 0.20 : 1100 : 650 : 13.00 : ← 0.20 : 310 : 10.70 : ← 0.20 : > 100	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.8 Tolerance mm : + 0.5 Del. quantity cm3/1000 strokes : 185. cm3/1000 strokes : + 20. Check tolerance cm3/1000s. : + 25. LOW IDLE Rated speed rpm : 375 Del. quantity cm3/1000 strokes : 23. cm3/1000 strokes : + 3.
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT	: 9.30 : ← 0.20 : 1100 : 650 : 13.00 : ← 0.20 : 310 : 10.70 : ← 0.20 : > 100	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.8 Tolerance mm : + 0.5 Del. quantity cm3/1000 strokes : 185. cm3/1000 strokes : + 20. Check tolerance cm3/1000s. : + 25. LOW IDLE Rated speed rpm : 375 Del. quantity cm3/1000 strokes : 23.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISG 4113

Combination No. : 0 402 736 898

Injection pump

Pump designation : PES6P12OA12ORS7351 EP type number : 0 412 726 922

Governor

Governer design. : RQV350...1100PA1173

: -2K

Governer no. : 0 421 815 501

Cust. part No. : 3931252

Customer—spec. information Customer : CDC Motor : 6CTA-A Power KW : 244.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.00Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : +- 0.50

Check

tolerance "NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 15.75

Tolerance mm : +- 0.05 Del. quantity	+ guide sleeve + travel mm : 13.50 + Tolerance mm : +- 0.50
cm3/1000 strokes : 250.5	
cm3/1000 strokes : +- 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1100 Aneroid pressure hPa : 1200
Spreed cm3/1000 strokes : 5.0	+ Del. quantity + cm3/1000 strokes : 250.5 + cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : 9.0	+ Check tolerance + cm3/1000S. : +- 4.0 + Spreed
Rated speed rpm : 375	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Rack travel in mm : 6.90	+
Tolerance mm : + 0.20 Del. quantity	<u> </u>
cm3/1000 strokes : 24.5	CONTROL LEVER
cm3/1000 strokes : + 3.0	+
Check tolerance cm3/1000s. : +- 5.0	- control lever - position degree : 119.0
Spreed	tolerance degree : +- 6.0
cm3/1000 strokes : 8.0	+
Check tolerance : 12.0	RATED SPEED
cm3/1000s. : 12.0	rack travel mm : 14.20
	Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR	† + rack travel mm : 7.50
	Rated speed rpm : 1355
GUIDE SLEEVE TRAVEL	Tolerance 1/min : +- 5
Rated speed rpm : 350	rack travel mm : 0.50
guide sleeve : 2.11	Tolerance mm : + 0.50 Rated speed rpm : 1500
Tolerance mm : + 0.20	Traces opeca i piii . 1900
Rated speed rpm : 1159	
guide sleeve	LOW IDLE
travel mm : 7.79	†
Tolerance mm : + 0.15	t - control lever
Rated speed rpm : 726	position degree : 71.0
guide sleeve	tolerance degree : + 6.0
travel mm : 4.80 - 701erance mm : + 0.25	Testing:
•	+
Rated speed rpm : 420	Rated speed rpm : 375
guide sleeve - travel mm : 3.10 -	rack travel mm : 6.90 Tolerance mm : +- 0.20
Tolerance mm : + 0.25	+
•	Rated speed rpm : 250
Rated speed rpm : 1640 -	CRT mm min. :> 7.50

Data damandan		†
Rated speed rpm	: 445	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		Aneroid pressure hPa : 1200
Rated speed rpm	: 1100	A Rated speed rpm : 750
rack travel mm Tolerance mm	: +- 0.05	Del. quantity cm3/1000 strokes : 236.5
Rated speed rpm	: 650	+ cm3/1000 strokes : + 3.0 + Check tolerance
rack travel mm Tolerance mm	: 14.50 : +- 0.20	cm3/1000s. : + 6.0 Spreed
Rated speed rpm	: 1200	+ cm3/1000 strokes : 8.0 + Check tolerance
rack travel mm Tolerance mm	: 15.30 : + 0.10	cm3/1000s. : 12.0
Rated speed rpm	• 750	+ Aneroid pressure + hPa : -
rack travel mm Tolerance mm	14.70	Rated speed rpm : 1100
Tolerance mm	: +- 0.20	+ Del. quantity + cm3/1000 strokes : 95.5
		+ cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000s. : + 4.0
SETTING		BREAKAWAY
Rated speed rpm	: 1100	‡
Pressure hPa	: 1200	Rack travel in mm : 14.20 Rated speed rpm : 1250
MEASUREMENT		Tolerance 1/min : +- 15
Pressure hPa	: -	+
Rated speed rpm rack travel mm	: 1100 : 9.50	STARTING FUEL DELIVERY
Tolerance mm		+
Rated speed rpm	: 1100	+ Rated speed rpm : 100 + rack travel mm : 11.90
		Tolerance mm : +- 0.50
Pressure hPa rack travel mm	: 765 : 14.10	+ Del. quantity + cm3/1000 strokes : 191.5
Tolerance mm	: +- 0.20	+ cm3/1000 strokes : +- 20.0
Pressure hPa	: 330	+ Check tolerance + cm3/1000s. : +- 25.0
rack travel mm	: 11.10	+
Tolerance mm	: +- 0.20	‡
START CUT-OUT		LOW IDLE
Rated speed rpm	: > 100	Rated speed rpm : 375
Rated speed rpm	: < 290	<pre>+ Del. quantity + cm3/1000 strokes : 24.5</pre>
Check		+ cm3/1000 strokes : +- 3.0
speed 1/min Check	: > 80	+ Check tolerance + cm3/1000s. : + 5.0
speed 1/min	: < 300	+ Spreed
		+ cm3/1000 strokes : 8.0

Check tolerance cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 905

Injection pump

Pump designation : PES6P120A120RS7416

EP type number : 0 412 726 959

Governor

Governer design. : RQV400...1250PA1060

: -3K

Governer no.

: 0 421 815 513

Cust. part No. : 3928145

Customer—spec. information Customer : CDC : 6BTA-A Motor

Power KW

: 119.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Tolerance bar : + 0.1

Test nozzle holde assembly : 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : \leftarrow 1.5

Test Lines : 1 680 750 015

Outside diameter :

6.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240 : -300

Tolerance : +- 0.30

Check

tolerance *NW

: +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.25

Tolerance

: +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.35

Tolerance mm : + 0.05

	+	Tolerance mm : +- 0.50
Del. quantity	+	
cm3/1000 strokes	: 153.5	
7/4000	: + 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: - 1.0	Rated speed rpm : 1250
Check tolerance		Aneroid pressure
cm3/1000S.	: + 4.0	hPa : 1200
	1	Del. quantity
Spreed	+	cm3/1000 strokes : 153.5
cm3/1000 strokes	: 8.0	cm3/1000 strokes : $+$ 1.0
	+	Check tolerance
Check tolerance	. 43.0	cm3/1000s. : +- 4.0
cm3/1000S.	: 12.0	Spreed cm3/1000 strokes : 8.0
Batad speed rom	: 420	Check tolerance
Rated speed rpm	· 420	cm3/1000s. : 12.0
	1	
Rack travel in mm	: 6.00	
	: ← 0.20 }	**************************************
Del. quantity	+	CONTROL LEVER
cm3/1000 strokes		
cm3/1000 strokes	: + 3.0 +	control lever
Check tolerance		position degree : 117.0
cm3/1000s.	: ← 5.0	tolerance degree : +- 4.0
Spreed cm3/1000 strokes	: 4.0	RATED SPEED
Check tolerance	. 4.0	אאובט טו בבט
cm3/10005.	: 8.0	rack travel mm : 12.30
	+	Rated speed rpm : 1325
	+	Tolerance 1/min : +- 15
(B) SETTING OF INJ	TECTION PUMP +	
WITH GOVERNOR	†	rack travel mm : 4.00
	†	Rated speed rpm : 1475 Tolerance 1/min : +- 15
GUIDE SLEEVE TRAVE	i I	Tolerance 1/min : +- 15
GOIDE SPEENE INVAL	I.	rack travel mm : 0.50
Rated speed rpm	: 400	Tolerance mm : +- 0.50
guide sleeve	1	Rated speed rpm : 1550
travel mm	: 1.44	·
Tolerance mm	: ← 0.20 +	
	+	
Rated speed rpm	: 1329	LOW IDLE
guide sleeve	. 7.87	
travel mm	: 7.83 : +- 0.15	control lever
Tolerance mm	· - 0.13	position degree : 71.0
Rated speed rpm	: 939	tolerance degree : +- 4.0
guide sleeve	<u> </u>	5550, 2,100 55 5 , 55 7
travel mm	: 5.18	Testing:
Tolerance mm	: ← 0.25 +	
	+	Rated speed rpm : 420
Rated speed rpm	: 640 +	rack travel mm : 6.00
guide sleeve	, _{7.54} †	Tolerance mm : + 0.20
travel mm	: 3.56 : + 0.25	Rated speed rpm : 400
Tolerance mm	· · · · · I	neceu specu i piii . 400
Rated speed rpm	: 1690	CRT mm min. :> 5.80
guide sleeve	<u></u>	
travel mm	: 11.50	Rated speed rpm : 425

TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 13.35 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 12.00 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.40 : +- 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1250 : 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 350 : 12.70 : ← 0.30
Pressure hPa rack travel mm Tolerance mm	: 265 : 11.80 : + 0.20
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 280
Check	: > 80
speed 1/min Check	: > 00

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed cm3/1000 strokes	: 1200 : 800 : 133.0 : + 3.0 : + 6.0 : 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s.	: - : 1250 : 106.0 : + 1.0 : + 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.30 : 1325 : + 15
STARTING FUEL DEL	IVERY

STARTING FUEL DELIVERY			
rack travel mm Tolerance mm Del. quantity	: 100 : 13.50 : + 0.50 : 155.0 : + 20.0 : + 25.0		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 906

Injection pump

Pump designation : PES6P12OA12ORS7416 EP type number : 0 412 726 959

Governor

Governer design. : RQV400...1250PA1060

: -4K

Governer no. : 0 421 815 514

Cust. part No. : 3928146

Customer—spec. information
Customer : CDC
Motor : 6BTA-A
Power KW : 130.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : \leftarrow 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 6.25 Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.65

Tolerance mm	: ← 0.05 +	guide sleeve
		travel mm : 11.50
Del. quantity	+	Tolerance mm : + 0.50
cm3/1000 strokes	: 160.5	
7.44000	+	
cm3/1000 strokes	: + 1.0	GUIDE SLEEVE POSITION
Check tolerance		Rated speed rpm : 1390
cm3/1000s.	: + 4.0 	
		Rack travel in mm : 12.60
Spreed	+	
cm3/1000 strokes	: 8.0 +	
	+	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	+	
cm3/1000s.	: 12.0 +	Rated speed rpm : 1250
-	+	Aneroid pressure
Rated speed rpm	: 420 +	hPa : 1200
	†	Del. quantity
Dash Assertal da es	. 400	cm3/1000 strokes : 160.5
Rack travel in mm		cm3/1000 strokes : + 1.0
Tolerance mm	; - 0.10 †	Check tolerance cm3/1000s. : +- 4.0
Del. quantity cm3/1000 strokes	. 15.0	Spreed : +- 4.0
cm3/1000 strokes		cm3/1000 strokes : 8.0
Check tolerance		Check tolerance
cm3/1000s.	· + 50 I	cm3/1000s. : 12.0
Spreed	I	- TE-U
cm3/1000 strokes	\cdot 4.0	
Check tolerance	·	
cm3/1000s.	: 8.0	CONTROL LEVER
1,0000	1	
	1	control lever
(B) SETTING OF IN	JECTION PUMP	position degree : 117.0
WITH GOVERNOR	+	tolerance degree : +- 4.0
	 	
		RATED SPEED
GUIDE SLEEVE TRAV	EL +	10.70
	+	rack travel mm : 12.60 Rated speed rpm : 1325
Rated speed rpm		Rated speed rpm : 1325
guide sleeve	. 1,,	Tolerance 1/min : + 15
travel mm	1.44	nach traval mm . / OO
Tolerance mm	; - 0.20	rack travel mm : 4.00
Rated speed rpm	. 1320	Rated speed rpm : 1475 Tolerance 1/min : +- 5
	ı	TOLET GITTE TAILET . 1 J
guide steeve travel mm Tolerance mm	. 7.83 I	rack travel mm : 0.50
Tolerance mm	: +- 0.15	Tolerance mm : + 0.50
TO COT GETTE HAM	1	Rated speed rpm : 1550
Rated speed rpm	: 939	
guide steeve	+	
travel mm	: 5.18	
travel mm Tolerance mm	: + 0.25	LOW IDLE
	1	
Rated speed rpm	: 640	
audda claeva	1	control lever
travel mm	: 3.56	position degree : 71.0
Tolerance mm	: +- 0.25 	tolerance degree : +- 4.0
	+	-
Rated speed rpm	: 1690	Testing:
, ·	+	
	•	

Rated speed rpm	: 420	+ Check
rack travel mm	: 6.00	+ speed 1/min : < 290
rack travel mm Tolerance mm	: + 0.10	1
100010100 11411		
Rated speed rpm	: 300	FUEL DELIVERY CHARACTERISTICS
· · · · · · · · · · · · · · · · · · ·		
CRT mm min.	: > 5.80	+ Aneroid pressure
	3,000	+ hPa : 1200
Rated speed rpm	. 425	+ hPa : 1200 + Rated speed rpm : 800
Macca opeca (pii	• 465	
		+ Del. quantity
TORQUE CONTROL		cm3/1000 strokes : +- 3.0
TOTALE CONTINCE		- Check tolerance
Rated speed rpm	• 1250	+ cm3/1000s. : +- 6.0
		Spreed
rack travel mm Tolerance mm	: +- 0.05	- cm3/1000 strokes : 8.0
ioterance min	. +- 0.03	
Dakad ameed mee	. 000	+ Check tolerance + cm3/1000S. : 12.0
Rated speed rpm	. 44.05	- cm3/1000s. : 12.0
rack travel mm Tolerance mm	: 17.85	A
ioterance mm	: +- 0.70	+ Aneroid pressure
		+ hPa : -
Rated speed rpm	; 500	Rated speed rpm : 1250
Rated speed rpm rack travel mm Tolerance mm	: 11.60	+ Del. quantity + cm3/1000 strokes : 111.5
Tolerance mm	: +- 0.20	
		+ cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE		+ cm3/1000s. : + 4.0
COMPENSATOR TEST		+
		
		+ BREAKAWAY
SETTING		
		+
Rated speed rpm	: 1250	A Rack travel in mm : 12.60
ressure hPa	: 1200	+ Rated speed rpm : 1325
		+ Tolerance 1/min : + 15
IEASUREMENT		1
		}
ressure hPa	: -	<u> </u>
Rated speed rpm	: 1250	+ STARTING FUEL DELIVERY
ack travel mm	: 10.60	+
olerance mm	: ← 0.20	+ Rated speed rpm : 100
		+ rack travel mm : 14.10
ated speed rpm	: 1250	+ Tolerance mm : +- 0.50
acca opeca (pil	. ,_,	Del. quantity
ressure hPa	: 375	- cm3/1000 strokes : 155.0
ressure nra ack travel mm		cm3/1000 strokes : +- 20.0
		Check tolerance
olerance mm	: +- 0.30	
	. 2/0	+ cm3/1000s. : +- 25.0
ressure hPa	: 260	†
ack travel mm	: 11.60	†
Folerance mm	: ← 0.20	†
		LOUTING
TART CUT-OUT		† • • • • • • • • • • • • • • • • • • •
		+ Rated speed rpm : 420
Rated speed rpm		+ Del. quantity
Rated speed rpm	: < 280	+ cm3/1000 strokes : 15.0
		+ cm3/1000 strokes : +- 3.0
Check		† Check tolerance
speed 1/min	: > 80	+ cm3/1000s. : +- 5.0
•		·
47		

Spreed cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. : 8.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 Test oil : ISO 4113

Combination No. : 0 402 736 910

Injection pump

Pump designation : PES6P120A720RS7351 EP type number : 0 412 726 922

Governor

Governer design. : RQV450...1100PA1291K

Governer no. : 0 421 815 526

Cust. part No. : 3931948

Customer-spec. information Customer : CDC
Motor : 6CT/
Power KW : 224 : 6CTA-A : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

: 40 temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : + 0.05 Check tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.75 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes	: 215.0	+ Aneroid pressure + hPa : -
cm3/1000 strokes	: +- 1.0	+ Del. quantity + cm3/1000 strokes : 215.0 + cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s.	: + 4.0	Check tolerance + cm3/1000s. : + 4.0 + Spreed
Spreed cm3/1000 strokes	: 5.0	- cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0
Check tolerance cm3/1000s.	: 9.0	
Rated speed rpm	: 450	CONTROL LEVER
Rack travel in m Tolerance mm Del. quantity		control lever position degree : 116.0 tolerance degree : +- 6.0
cm3/1000 strokes cm3/1000 strokes	: ← 3.0	RATED SPEED
Check tolerance cm3/1000s.	: +- 5.0	+ rack travel mm : 13.70 + Rated speed rpm : 1165 + Tolerance 1/min : +- 15
cm3/1000 strokes Check tolerance cm3/1000s.		rack travel mm : 7.80 Rated speed rpm : 1250 Tolerance 1/min : +- 5
(B) SETTING OF IN		+ rack travel mm : 0.50 + Tolerance mm : +- 0.50 + Rated speed rpm : 1375
Rated speed rpm		LOW IDLE
guide sleeve travel mm	: 1.23	I
Tolerance mm		control lever position degree : 76.0
Rated speed rpm guide sleeve		tolerance degree : +- 6.0
guide sleeve travel mm Tolerance mm	: 7.71 : +- 0.15	Testing:
Rated speed rpm guide sleeve	: 870	Rated speed rpm : 450 rack travel mm : 6.80 Tolerance mm : + 0.20
travel mm	: 4.59	+
Tolerance mm	: 0.25	Rated speed rpm : 325
Rated speed rpm guide sleeve		+ CRT mm min. :> 8.50
travel mm Tolerance mm	: 13.50 : +- 0.50	Rated speed rpm : 525
		TORQUE CONTROL
FULL LOAD DELIVER	RY AT FULL LOAD STOP	+
Rated speed rpm	: 1100	+ Rated speed rpm : 1100 + rack travel mm : 14.75

Tolerance mm : +- 0.05

Rated speed rpm : 800 rack travel mm : 13.80 : +- 0.10 Tolerance mm

Rated speed rpm : 500 rack travel mm : 12.70 Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 800 Rated speed rpm :

Del. quantity cm3/1000 strokes : 207.0 cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : ← 6.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

BREAKAWAY

Rack travel in mm: 13.70 Rated speed rpm : 1165
Tolerance 1/min : ← 15

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 11.80 : +- 0.50 Tolerance mm

Del. quantity

cm3/1000 strokes : 180.0 cm3/1000 strokes : \leftarrow 20.0

Check tolerance

: +- 25.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 450

Del. quantity cm3/1000 strokes : cm3/1000 strokes : + 3.0 Check tolerance

cm3/1000s. : \leftarrow 5.0 Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 11.06.96 Edition Test oil : ISO 4113

Combination No. : 0 400 075 923

Injection pump

Pump designation : PES5M55C32ORS168 EP type number : 0 410 055 978

Governor

Governer design. : RSF385/2000M55-8 Governer no. : 0 420 021 269

Cust. part No. :

Customer-spec. information

Customer : DPICO

: 0M602-2.9l (Dom) Motor

Power KW : 69.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 : +- 2.0 Tolerance °C

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

: 1 688 901 111 assembly

Opening pressure

bar : 148.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter :

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.05 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1-2-4-5-3

: 0-72-144-216-288 Phasing

Start of delivery blocking

*NW after s.o.d. : 15.50 Tolerance : + 0.20 Check

tolerance $^{\circ}NW$: \leftarrow 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 12.15 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 38.5

cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s. : +- 1.5

Spreed

cm3/1000 strokes : 2.5

3.0

Check tolerance cm3/1000s.

705	
Rated speed rpm : 385	LOW IDLE
Rack travel in mm: 5.60	
Tolerance mm : + 0.10	
Del. quantity +	control lever
cm3/1000 strokes : 9.0	position degree : 14.0
cm3/1000 strokes : + 0.5	tolerance degree : +- 2.0
cm3/1000 strokes : 1.0	Setting point w/out bumper spring
	Rated speed rpm : 385
+	rack travel mm : 5.60
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	SET IDLE AUXILIARY SPRING
	Rated speed rpm : 500
IDLE STAGE	rack travel mm : 3.80
+	Tolerance mm : + 0.10
+	
Rack travel in mm: 6.25 + Tolerance mm: + 0.25 +	Load pick-up
Toterance min : += 0.25	Rated speed rpm : 250
	rack travel mm : 12.20
FULL LOAD DELIVERY AT FULL LOAD STOP	
+	Rated speed rpm : 1000
Rated speed rpm : 1000	CRT mm max. : 1.45
Ref. pressure + ALDA / ADA hPa : - +	CRT mm max. : 1.45
Del. quantity	rack travel mm : 5.60
cm3/1000 strokes : 38.5	Rated speed rpm : 385
cm3/1000 strokes : + 0.5 +	
Check tolerance +	
cm3/1000s. : + 1.5	TORQUE CONTROL
Spreed + cm3/1000 strokes : 2.5 +	PORQUE CONTROL
Check tolerance	Rated speed rpm : 1000
cm3/1000s. : 3.0	rack travel mm : 12.15
+	Tolerance mm : +- 0.05
DATES CREES	Rated speed rpm : 1800
RATED SPEED	rack travel mm : 12.00
 	Toterance mm : + 0.10
control lever	
position degree : 50.0 +	Rated speed rpm : 2000
2250	rack travel mm : 11.80
Rated speed rpm : 2250 + rack travel mm : 7.70 +	Tolerance mm : +- 0.10
Tolerance mm : + 0.25	
+	
Rated speed rpm : 2550 +	
rack travel mm : 0.50	FUEL DELIVERY CHARACTERISTICS
Tolerance mm : + 0.50	Dof neccure
	Ref. pressure ALDA / ADA hPa : -
SET IDLE CONTROL LEVER POSITION	Rated speed rpm : 1800
+	Del. quantity
Rated speed rpm : 1000	cm3/1000 strokes : 40.8
1/5	cm3/1000 strokes : + 0.8
CRT mm max. : 1.45	Check tolerance cm3/1000S. : +- 1.8
#	(III) (UUU). ; T 1.0

		 +
		
cm3/1000 strokes Check tolerance cm3/1000s.	: 6.0 : 6.0	End of test specification sheet
Check tolerance cm3/1000S. Spreed	: +- 5.0	
m3/1000 strokes		Vacuum hPa : -450.0
Del. quantity cm3/1000 strokes	: 59.0	+ Rated speed rpm : 385
Tolerance mm	: + 1.50	TESTING PNEUMATIC SHUTOFF DEVICE
Rated speed rpm rack travel mm	: 100 : 21.60	
STARTING FUEL DEL	IVERY	
		+ cm3/1000s. : + 4.5
cm3/1000s.	: 3.0	+ Check tolerance
Check tolerance	. 2.3	+ cm3/1000 strokes : + 3.5
Spreed cm3/1000 strokes	: 2.5	+ Del. quantity + cm3/1000 strokes : 22.0
cm3/1000s.	: +- 3.0	+ Tolerance mm : + 0.80
Check tolerance		Rack travel in mm: 8.50
cm3/1000 strokes cm3/1000 strokes		+ Rated speed rpm : 400
Del. quantity	. 25.5	† Para I amanda ama
Tolerance mm		tolerance degree : + 2.0
rack travel mm	: 7.70	position degree : 14.0
ALDA / ADA hPa Rated speed rpm	: – : 2250	t control lever
Ref. pressure		+
HIGH IDLE		SETTING PNEUMATIC FAST IDLE (PLA) (PLA) POSITION
CIII-7 10000.	. 5.0	position degree : < 44.50
Check tolerance cm3/1000s.	: 3.0	+ control lever
cm3/1000 strokes	: 2.5	+
Spreed	. +- 2.0	position degree : > 47.00
Check tolerance cm3/1000s.	: +- 2.0	+ control lever
cm3/1000 strokes		Ŧ
Del. quantity cm3/1000 strokes	. 41 0	<u> </u>
Spreed	. 2500	+
ALDA / ADA hPa Rated speed rpm	: 2000	- cm3/1000s. : 1.5
Ref. pressure		+ Check tolerance
cm3/1000s.	: 3.0	+ cm3/1000s. : +- 2.3 + Spreed
	7.0	+ Check tolerance
Check tolerance		3

K20

Rated speed rpm : 385

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.06.96 : ISO 4113

Combination No. : 0 402 046 866

Injection pump

Pump designation : PES6P120A720RS3346 EP type number : 0 412 026 778

Governor

Governer design. : RQ300/1025PA1213

Governer no. : 0 421 801 783

Cust. part No. :

Customer-spec, information

Customer : IVECO-FIAT

Motor

: 8360.46.4649

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 417 413 034

Inlet press. bar : 2.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

K21

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm

: 3.55 : + 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

: +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : + 0.50

BASIC SETTING

Rated speed rpm : 1025

Rack travel in mm: 11.90

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 175.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

cm3/1000 strokes :

5.0

Check tolerance	0.0	+ Rated speed rpm	: 1300
cm3/1000s.	: 9.0	‡	
Rated speed rpm	: 300	†	
		+ LOW IDLE	
Rack travel in mm	. 5 50	İ	
Tolerance mm	: +- 0.10	T control lever	
Del. quantity		+ position degree	: 70.0
cm3/1000 strokes		tolerance degree	: +- 4.0
cm3/1000 strokes		+	
Check tolerance		† Testing:	
cm3/1000s.	: +- 6.0	Poted aread pur	. 700
Spreed cm3/1000 strokes	. 80	Rated speed rpm	: 300 · 5 50
Check tolerance		rack travel mm Tolerance mm	: +- 0.10
cm3/1000s.	: 12.0	- Total direc wan	
·- · · · · - · ·		rack travel mm	: 2.00
		Rated speed rpm Tolerance 1/min	: 380
(B) SETTING OF IN	NJECTION PUMP	† Tolerance 1/min	: +- 20
WITH GOVERNOR		+ Rated speed rpm	• 200
		+ rated speed tbu	. 200
		+ CRT mm min.	: > 7.00
GUIDE SLEEVE POST	ITION	+	
Rated speed rpm	. 550	TORQUE CONTROL	
Mateu speed i pili	. 550	T TORAGE CONTROL	
Rack travel in ma		Rated speed rpm	: 1025
Tolerance mm	: 0.80	+ rack travel mm	: 11.90
		+ Tolerance mm	: +- 0.05
FULL LOAD DELTHE	RY AT FULL LOAD STOP	Pated speed rom	. 500
LOFF FOWD DEFINE	AT FOLL LOAD STOP	rack travel mm	• 11.95
Rated speed rpm	: 1025	Rated speed rpm rack travel mm Tolerance mm	: +- 0.10
Aneroid pressure		+	
hPa	: 900	+ Rated speed rpm	: 1025
Del. quantity		+ rack travel mm	
cm3/1000 strokes		+ Tolerance mm	: ← 0.05
cm3/1000 strokes	: +- 1.0	I Pated speed and	: 500
Check tolerance cm3/1000s.	: +- 4.0	+ Rated speed rpm + rack travel mm	
Spreed	• • •••	Tolerance mm	: + 0.10
cm3/1000 strokes	: 5.0	+	
Check tolerance		+	
cm3/1000s.	: 9.0	+ ANEROID/ALTITUDE	
		+ COMPENSATOR TEST	
RATED SPEED		I	
NATED OFFERD		SETTING	
rack travel mm	: 10.90	+	
Rated speed rpm		+ Rated speed rpm	: 500
Tolerance 1/min	: +- 8	+ Pressure hPa	: 900
maint. Minimate - 1	. / 00	rack travel mm	: 11.90
rack travel mm	: 4.00 : 1150	† Tolerance mm	: +- 0.05
Rated speed rpm Tolerance 1/min		T MEASUREMENT	
TOTAL TAILUR		+	
rack travel mm	: 0.50	Pressure hPa	; -
Tolerance mm	: +- 0.50	+ Rated speed rpm	: 500

Tolerance mm	: + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 270 : 10.00 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 500 : 11.30 : ← 0.05
FUEL DELIVERY CHA	
Aneroid pressure hPa	: 900
nra Rated speed rpm	: 900 : 500
Del. quantity	. 500
cm3/1000 strokes	: 168.0
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 500
Del. quantity	400.0
cm3/1000 strokes	: 102.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: ← 4.0
BREAKAWAY	
Rack travel in mm	: 10.90
Rated speed rpm	: 1078
Tolerance 1/min	: +- 8

Rated speed rpm : 300

Del. quantity
cm3/1000 strokes : 20.0
cm3/1000 strokes : + 3.0

Check tolerance
cm3/1000s. : + 6.0

Spreed
cm3/1000 strokes : 8.0

Check tolerance
cm3/1000s. : 12.0

End of test specification sheet

Rated speed rpm : 100

cm3/1000 strokes : + 15.0

90.0

: +- 19.0

Del. quantity

Check tolerance cm3/1000s.

cm3/1000 strokes :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 24.06.94 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 865

Injection pump

Pump designation : PE6P120A720RS7020 EP type number : 0 412 626 828

Governor

Governer design. : RQV200...1000PA539

: -8

: 0 421 813 635 Governer no.

Cust. part No. : 1121370

Customer-spec. information Customer : SCANIA : DS11 34 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : **←** 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 5.05 : **←** 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : + 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.95 Tolerance mm : + 0.05

+	
Del. quantity cm3/1000 strokes : 209.0	CONTROL LEVER
cm3/1000 strokes : + 1.0	control lever position degree : 59.0
Check tolerance + 4.0 +	tolerance degree : +- 4.0 control lever
Spreed cm3/1000 strokes : 6.0	position degree : 117.0 tolerance degree : + 4.0
Check tolerance	RATED SPEED
Rated speed rpm : 225	rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : +- 5
Rack travel in mm: 4.70 Tolerance mm: + 0.10 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : +- 15
<pre>cm3/1000 strokes : 20.0 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed</pre>	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250
cm3/1000 strokes : 3.0 + Check tolerance	
cm3/1000s. : 6.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<pre>control lever position degree : 65.0 tolerance degree : +- 4.0</pre>
GUIDE SLEEVE POSITION	control lever position degree : 9.0 tolerance degree : +- 4.0
Rated speed rpm : 1050 + Rack travel in mm : 16.50 +	Testing:
Tolerance mm : + 1.30	Rated speed rpm : 225 rack travel mm : 4.70 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	Rated speed rpm : 100
Rated speed rpm : /UU + Aneroid pressure + hPa : 900 +	CRT mm min. : > 6.10
Del. quantity cm3/1000 strokes : 209.0	Rated speed rpm : 275
cm3/1000 strokes : +- 1.0 +- Check tolerance cm3/1000s. : +- 4.0 +-	TORQUE CONTROL
Spreed : 4.0 Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 1000 rack travel mm : 12.95 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 900 12.95 rack travel mm : Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa 500 Rated speed rpm rack travel mm 10.70 : +- 0.20 Tolerance mm

500 Rated speed rpm

: 320 Pressure hPa 11.20 rack travel mm : +- 0.15 Tolerance mm

520 Pressure hPa : 12.35 rack travel mm : Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

900 Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 202.0 cm3/1000 strokes : +- 4.0

Check tolerance cm3/1000s.: + 6.0

Aneroid pressure

hPa 500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 153.0 cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

11.90 Rack travel in mm: Rated speed rpm : 1045 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm :
Tolerance mm 20.50 : **←** 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 300.0 cm3/1000 strokes : + 20.0Check tolerance

: +- 24.0

LOW IDLE

cm3/1000s.

Rated speed rpm 225 Del. quantity cm3/1000 strokes : 20.0 cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-4.0 Spreed cm3/1000 strokes : 3.0 Check tolerance cm3/1000s.6.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 24.06.94 Test ail : ISO 4113

Combination No. : 0 402 646 878

Injection pump

Pump designation : PE6P120A720RS7020

EP type number : 0 412 626 828

Governor

Governer design. : RQV200...1000PA539

: -11

Governer no. : 0 421 813 813

Cust. part No. : 1121371

Customer—spec. information Customer : SCANIA Motor : DS11 34

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.95

Tolerance mm : + 0.05

	1
Del. quantity cm3/1000 strokes : 209.0	RATED SPEED
	+ rack travel mm : 11.90
cm3/1000 strokes : + 1.0	Rated speed rpm : 1045
	+ Tolerance 1/min : + 5
Check tolerance	†
cm3/1000s. : + 4.0	+ rack travel mm : 4.00
Spreed	+ Rated speed rpm : 1150 + Tolerance 1/min : + 15
cm3/1000 strokes : 6.0	I loterance thin . — 15
CIID/ 1000 SETORES . C.O	rack travel mm : 0.50
Check tolerance	+ Tolerance mm : + 0.50
cm3/1000s. : 9.0	Rated speed rpm : 1250
	+
- 1	+
Rack travel in mm: 4.70	104 701 5
Tolerance mm : +- 0.10	+ LOW IDLE
	I
(B) SETTING OF INJECTION PUMP	- control lever
WITH GOVERNOR	position degree : 65.0
	+ tolerance degree : + 4.0
	+
OUT TO A STORY DOOR TON	+ control lever
GUIDE SLEEVE POSITION	position degree : 9.0 tolerance degree : + 4.0
Rated speed rpm : 1050	1 toterance degree : 7 4.0
Rated speed (piii : 1050	Testing:
Rack travel in mm : 16.50	+
Tolerance mm : + 1.30	+ Rated speed rpm : 225
	+ rack travel mm : 4.70
	+ Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	100
Rated speed rpm : 700	Rated speed rpm : 100
Rated speed rpm : 700 Aneroid pressure	+ CRT mm min. :> 6.10
hPa : -	City han thirti.
Del. quantity	+ Rated speed rpm : 275
cm3/1000 strokes : 209.0	+
cm3/1000 strokes : +- 1.0	+
Check tolerance	+ TORQUE CONTROL
cm3/1000s. : +- 4.0	1000
Spreed cm3/1000 strokes : 6.0	+ Rated speed rpm : 1000 + rack travel mm : 12.95
Check tolerance	rack travel mm : 12.95 Tolerance mm : + 0.05
cm3/1000s. : 9.0	+ Toter drice hair
	+ ANEROID/ALTITUDE
	+ COMPENSATOR TEST
CONTROL LEVER	†
control lever	+ SETTING
position degree : 59.0	T OF LINE
tolerance degree : +- 4.0	Rated speed rpm : 500
	+ Pressure hPa : 900
control lever	+ rack travel mm : 12.95
position degree : 117.0	+ Tolerance mm : +- 0.05
tolerance degree : +- 4.0	†
	+ MEASUREMENT

Pressure hPa Rated speed rpm : 500 rack travel mm : 10.70 Tolerance mm : + 0.20

500 Rated speed rpm :

Pressure hPa : 320 : 11.20 rack travel mm Tolerance mm : **←** 0.15

Pressure hPa : 520 rack travel mm : 12.35 Tolerance mm : **←** 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 1000

Del. quantity

cm3/1000 strokes : 202.0 cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 153.0 cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 : +- 0.50 Tolerance mm

Del. quantity

cm3/1000 strokes : 300.0 cm3/1000 strokes : +- 20.0

Check tolerance

: +- 24.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 10.06.96 Test oil : ISO 4113

Combination No. : 0 403 244 045

Injection pump

Pump designation : PES4MW100/720RS1524

EP type number : 0 413 204 021

Governor

Governer design. : RQV300...1300MW132

: -12

Governer no. : 0 420 083 329

Cust. part No. : 0240740902

Customer-spec. information Customer : MB-NFZ Motor : CM364LA Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

itside diameter :

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.00 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 89.0

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

cm3/1000 strokes : 4.5

Check tolerance

cm3/1000s. : 7.0

L02

Rated speed rpm	: 300	+ Tolerance mm : + 0.50
Rack travel in mm Tolerance mm	: 4.40 : +- 0.10	GUIDE SLEEVE POSITION
Del. quantity cm3/1000 strokes		Rated speed rpm : 1350
cm3/1000 strokes Check tolerance cm3/1000s.		Rack travel in mm: 10.00 Tolerance mm: +- 2.70
Spreed cm3/1000 strokes		FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.		Rated speed rpm : 1300
		Aneroid pressure hPa : 700
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	Del. quantity cm3/1000 strokes : 89.0 cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAV	EL	cm3/1000s. : ← 3.0 Spreed
Rated speed rpm guide sleeve	: 300	cm3/1000 strokes : 4.5 Check tolerance
travel mm Tolerance mm	: 0.91 : + 0.25	cm3/1000s. : 7.0
Rated speed rpm guide sleeve	: 1353	CONTROL LEVER
travel mm Tolerance mm	: 7.14 : + 0.25	control lever
Rated speed rpm	: 1130	+ position degree : 111.0 + tolerance degree : + 4.0
guide sleeve travel mm Tolerance mm	: 5.40 : + 0.25	RATED SPEED
Rated speed rpm	: 610	rack travel mm : 10.00 Rated speed rpm : 1345 Tolerance 1/min : +- 5
guide sleeve travel mm Tolerance mm	: 2.96 : + 0.25	+ Tolerance 1/min : +- 5 + - rack travel mm : 4.00
Rated speed rpm	: 660	Rated speed rpm : 1445 Tolerance 1/min : +- 15
guide sleeve travel mm Tolerance mm	: 3.31 : + 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50
Rated speed rpm guide sleeve	: 780 -	Rated speed rpm : 1550
travel mm Tolerance mm	: 3.72 : + 0.25	LOW IDLE
Rated speed rpm guide sleeve	-	control lever
travel mm Tolerance mm	: 12.00 : \(\dot 0.25 \)	position degree : 73.0 tolerance degree : +- 4.0
Rated speed rpm guide sleeve	: 1780	Testing:
travel mm	: 13.50	Rated speed rpm : 300

rack travel mm Tolerance mm		+ Aneroid pressure + hPa : 700 + Rated speed rpm : 750
Rated speed rpm	: 200	+ Del. quantity
CRT mm min.	•> 5 00	+ cm3/1000 strokes : 81.0 + cm3/1000 strokes : + 1.5
CICE HAN IN THE	. > 5.00	+ Check tolerance
TODOUE CONTROL		
TORQUE CONTROL		Spreed cm3/1000 strokes : 6.0
Rated speed rpm	: 1300	+ Check tolerance
rack travel mm Tolerance mm	: 11.00 : +- 0.05	+ cm3/1000s. : 9.0
roterance imi	. +- 0.05	Aneroid pressure
Rated speed rpm	: 750	+ hPa : −
rack travel mm Tolerance mm		+ Rated speed rpm : 500 + Del. quantity
roterance mm	: 0.10	+ cm3/1000 strokes : 56.0
		+ cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE COMPENSATOR TEST		+ Check tolerance + cm3/1000s. : + 3.0
COMPENSATOR TEST		T CIID/10003 +- 3.0
CETTING		+ BREAKAWAY
SETTING		+ BREAKAWAT
Rated speed rpm	: 500	+
Pressure hPa rack travel mm	: 700 : 11.00	Rack travel in mm: 10.00 Rated speed rpm: 1345
Tolerance mm	: + 0.05	Tolerance 1/min : +- 5
		+
MEASUREMENT		<u> </u>
Pressure hPa	: -	STARTING FUEL DELIVERY
Rated speed rpm Tolerance mm	: 500	+ Rated speed rpm : 100
loterance mm	: +- 0.10	+ Rated speed rpm : 100 + Del. quantity
Rated speed rpm	: 500	+ cm3/1000 strokes : 120.0
D=====================================	: 230	+ cm3/1000 strokes : + 5.0
Pressure hPa rack travel mm	: 230 : 0.90	+ Check tolerance + cm3/1000s. : +- 8.0
Tolerance mm	: + 0.10	+
Pressure hPa	: 150	<u> </u>
rack travel mm	: 0.30	Ţ
Tolerance mm	: ← 0.10	+ LOW IDLE
		+ Rated speed rpm : 300
START CUT-OUT		+ Del. quantity
D	. > 400	cm3/1000 strokes : 12.0
Rated speed rpm Rated speed rpm		+ cm3/1000 strokes : +- 2.0 + Check tolerance
nacea speed (pill	200	+ cm3/1000s. : +- 4.5
Check		+ Spreed
speed 1/min Check	: > 80	cm3/1000 strokes : 2.0 Check tolerance
speed 1/min	: < 220	cm3/1000s. : 4.0
		†
FUEL DELIVERY CHA	RACTERISTICS	 ‡
- JEE DESTRUCT VIII		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.06.96 : 10.06.96 : ISO 4113

Combination No. : 0 403 244 048

Injection pump

Pump designation : PES4MW100/720RS1524

EP type number : 0 413 204 021

Governor

Governer design. : RQV300...1300MW132

: -12

Governer no.

: 0 420 083 329

Cust. part No. : 0240741002

Customer-spec. information : MB-NFZ

Customer Motor

: 0M364LA

Power KW

: 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

L05

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : + 1.0

Prestroke mm

: 4.55 : + 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm: 21.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.00

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 89.0

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +-3.0

Spreed

cm3/1000 strokes :

4.5

Check tolerance

cm3/1000s.

7.0

Rated speed rpm	: 300 +	Tolerance mm : +- 0.50
Rack travel in mm Tolerance mm	: 4.40 : + 0.10	GUIDE SLEEVE POSITION
Del. quantity cm3/1000 strokes	: 12.0	Rated speed rpm : 1350
cm3/1000 strokes Check tolerance cm3/1000s.	: + 4.5	Rack travel in mm : 10.00 Tolerance mm : +- 2.70
Spreed cm3/1000 strokes	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: 4.0	Rated speed rpm : 1300 Aneroid pressure
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	hPa : 700 Del. quantity cm3/1000 strokes : 89.0 cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVI	EL +	Check tolerance cm3/1000S. : +- 3.0 Spreed
Rated speed rpm guide sleeve	: 300	cm3/1000 strokes : 4.5 Check tolerance
travel mm Tolerance mm	: + 0.91 : + 0.20	cm3/1000s. : 7.0
Rated speed rpm guide sleeve	: 1353	CONTROL LEVER
travel mm Tolerance mm	: 7.14 : ← 0.15	control lever
Rated speed rpm guide sleeve	: 1130	position degree : 111.0 tolerance degree : +- 4.0
travel mm Tolerance mm	: 5.40 : ← 0.25	RATED SPEED
Rated speed rpm guide sleeve	: 610	rack travel mm : 10.00 Rated speed rpm : 1345 Tolerance 1/min : +- 5
travel mm Tolerance mm	: 2.96 : + 0.25	rack travel mm : 4.00
Rated speed rpm guide sleeve	: 660	Rated speed rpm : 1445 Tolerance 1/min : +- 15
travel mm Tolerance mm	: 3.31 : ← 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve	: 780	Rated speed rpm : 1550
travel mm Tolerance mm	: 3.72 : + 0.25	LOW IDLE
Rated speed rpm guide sleeve	: 1679	control lever
travel mm Tolerance mm	: 12.00 : + 0.25	position degree : 74.0 tolerance degree : +- 4.0
Rated speed rpm guide sleeve	: 1780	Testing:
travel mm	: 13.50	Rated speed rpm : 300

rack travel mm Tolerance mm	: 4.40 : + 0.10
Rated speed rpm	: 200
CRT man min.	: > 5.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.00 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.00 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 11.00 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 230 : 0.90 : ← 0.10
Pressure hPa rack travel mm Tolerance mm	: 150 : 0.30 : +- 0.10
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 200
Check speed 1/min Check	: > 80
speed 1/min	: < 220

Aneroid pressure hPa		700
Rated speed rpm	:	750
Del. quantity cm3/1000 strokes cm3/1000 strokes	:	81.0 - 1.5
Check tolerance	• '	_ 1.5
cm3/1000s.	: +	- 4.0
Spreed cm3/1000 strokes	:	6.0
Check tolerance cm3/1000s.	:	9.0
Aneroid pressure		
hPa	:	_
Rated speed rpm Del. quantity	:	500
cm3/1000 strokes	:	56.0
cm3/1000 strokes Check tolerance	: +	- 1.0
cm3/1000s.	: +	- 3.0
BREAKAWAY		

Rack travel in mm	:	10.00
Rated speed rpm	:	1345
Tolerance 1/min	:	← 5

STARTING FUEL DELIVERY				
Rated speed rpm Del. quantity	: 100			
cm3/1000 strokes	: 120.0			
cm3/1000 strokes Check tolerance	: +- 5.0			
cm3/1000S.	: + 8.0			

LOW IDLE			
Rated speed rpm Del. quantity	:		300
cm3/1000 strokes	:		12.0
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s.	:	+-	4.5
Spreed cm3/1000 strokes	:		2.0
Check tolerance			

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.05.96 Edition Test oil : ISO 4113

Combination No. : 0 402 646 668

Injection pump

Pump designation : PE6P12OA32ORS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1278

: -1K

: 0 421 815 510 Governer no.

Cust. part No. : 1310220/1

Customer-spec. information

Customer : DAF

: XF 280 M Motor Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

Tolerance °C temp. °C : ← 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 145 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm: \leftarrow 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

: **←** 0.10 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

980 Rated speed rpm :

Rack travel in mm: 11.75

Tolerance mm	: +- 0.05	guide sleeve travel mm : 13.50
Del. quantity cm3/1000 strokes	: 280.0	+ Tolerance mm : + 0.50
cm3/1000 strokes	: +- 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: + 4.0	Rated speed rpm : 1171 Rack travel in mm : 10.70
Spreed cm3/1000 strokes	5.0	Tolerance mm : +- 2.00
Check tolerance cm3/1000s.	: 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 275	+ Rated speed rpm : 980 + Aneroid pressure + hPa : - Del. quantity
Rack travel in m	m: 4.00	cm3/1000 strokes : 280.0
Tolerance mm		+ cm3/1000 strokes : + 1.0
Del. quantity		+ Check tolerance
cm3/1000 strokes		Check tolerance cm3/1600s. : + 4.0
cm3/1000 strokes		+ Spreed
Check tolerance		- cm3/1000 strokes : 5.0
cm3/1000s.	: +- 6.0	+ Check tolerance
Spreed cm3/1000 strokes		+ cm3/1000s. : 9.0
Check tolerance		†
cm3/1000s.	: 12.0	CONTROL LEVER
(D) OFFTTNO OF Y	ALLECTION DUMP	†
(B) SETTING OF I	NUECTION PUMP	+ control lever + position degree : 118.0
WITH GOVERNOR		tolerance degree : + 4.0
GUIDE SLEEVE TRA	VEL	RATED SPEED
Rated speed rpm	: 275	rack travel mm : 10.70
guide sleeve		Rated speed rpm : 1050
travel mm	: 2.04	+ Tolerance 1/min : +- 5
Tolerance mm	: +- 0.20	†
0-4-4 1	10/3	+ rack travel mm : 4.00
Rated speed rpm	: 1062	+ Rated speed rpm : 1140 + Tolerance 1/min : +- 15
guide sleeve travel mm	: 10.04	† Tolerance 1/min : +- 15
Tolerance mm	: +- 0.15	T rack travel mm : 0.50
FOCE GIVE IIII	0.15	Tolerance mm : + 0.50
Rated speed rpm	: 697	Rated speed rpm : 1275
guide sleeve		+
travel mm	: 6.48	+
Tolerance mm	: +- 0.25	
		+ LOW IDLE
Rated speed rpm	: 400	†
guide sleeve	. 7.02	t control loves
travel mm	: 3.92 : ± 0.25	t control lever
Tolerance mm	: +- 0.25	<pre>position degree : 71.0 tolerance degree : +- 4.0</pre>
Rated speed rpm	: 1310	† T+
		+ Testing:

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Rated speed rpm ToRQUE CONTROL	: 275 : 4.00 : +- 0.10 : 175 : > 6.50 : 300	Rated speed rpm : 775 Pressure hPa : 640 rack travel mm : 11.00 Tolerance mm : +- 0.05 Pressure hPa : 320 rack travel mm : 8.60 Tolerance mm : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 980 : 11.75 : +- 0.05	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : -
Rated speed rpm rack travel mm Tolerance mm	: 11.85	Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 311.0 cm3/1000 strokes : + 2.0
Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.00 : +- 0.10	check tolerance cm3/1000s. : +- 5.0 Spreed
Rated speed rpm rack travel mm	: 700 : 11.70	cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 600 : 11.10 : ← 0.10 : 500 : 10.65 : ← 0.10 : 1000	Aneroid pressure hPa : - Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 181.0 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
ANEROID/ALTITUDE COMPENSATOR TEST		BREAKAWAY Rack travel in mm : 10.70
SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 775 : 1500 : 11.85 : +- 0.05	Rated speed rpm : 1050 Tolerance 1/min : +- 5
MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 775 : 7.55 : + 0.20	LOW IDLE Rated speed rpm : 275 Del. quantity cm3/1000 strokes : 17.0

cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.05.96 Test oil : ISO 4113

Combination No. : 0 402 648 891

Injection pump

Pump designation : PE8P120A720LS7189

: -10Q

EP type number : 0 412 628 894

Governor

Governer design. : RQV200...950PA736-8

Governer no. : 0 421 813 815

Cust. part No. : 1316120

Customer—spec. information Customer : SCANIA Motor : DSC14 08

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : \leftarrow 0.1

Tolerance l/h: + 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2-7-3-4 :-5-6-8

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 : +- 0.30

Tolerance Check

tolerance "NW : +- 0.50

Start of delivery mark

Tolerance : + 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

L14

Rack travel in mm Tolerance mm	: 12.35 : +- 0.05
Del. quantity cm3/1000 strokes	: 220.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Rated speed rpm	: 250
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: + 0.10 : 16.0 : + 3.0 : + 6.0
cm3/1000 strokes Check tolerance	: 4.0
cm3/1000s.	: 8.0
(B) SETTING OF INWITH GOVERNOR	JECTION PUMP
-	
WITH GOVERNOR	EL
GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	EL : 250 : 1.60 : ← 0.20
GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 250 : 1.60 : ← 0.20 : 995
GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	EL : 250 : 1.60 : ← 0.20 : 995
Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	EL : 250 : 1.60 : ← 0.20 : 995
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 250 : 1.60 : ← 0.20 : 995 : 7.80 : ← 0.10
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	EL : 250 : 1.60 : + 0.20 : 995 : 7.80 : + 0.10 : 350 : 2.60 : + 0.30
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	EL : 250 : 1.60 : + 0.20 : 995 : 7.80 : + 0.10 : 350 : 2.60 : + 0.30

Rated speed rpm guide sleeve travel mm Tolerance mm	: 1115 : 9.40 : + 0.20		
GUIDE SLEEVE POSITION			
Rated speed rpm	: 1150		
Rack travel in mm Tolerance mm	: 9.50 : +- 2.50		
FULL LOAD DELIVER	Y AT FULL LOAD STOP		
Rated speed rpm	: 700		
Aneroid pressure hPa	: 1500		
Del. quantity	220.0		
cm3/1000 strokes cm3/1000 strokes	: 220.0 : +- 1.0		
Check tolerance			
cm3/1000s. Spreed	: +- 4.0		
cm3/1000 strokes	: 8.0		
Check tolerance cm3/1000S.	: 12.0		
control lever position degree tolerance degree control lever position degree tolerance degree tolerance degree	: 60.0 : + 4.0 : 94.0 : + 4.0		
RATED SPEED			
rack travel mm Rated speed rpm	: 11.30 : 995		
Tolerance 1/min	: +- 5		
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1105 : +- 15		
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1250		
LOW IDLE			

	+	_
control lever position degree tolerance degree	: 45.0 : + 4.0	FUEL DELIVERY CHARACTERISTICS
control lever position degree tolerance degree Testing:	: 11.0 : + 4.0	- Aneroid pressure - hPa : 1500 - Rated speed rpm : 950 - Del. quantity - cm3/1000 strokes : 206.0 - cm3/1000 strokes : +- 4.0
Rated speed rpm rack travel mm Tolerance mm	: 4.50 	- Check tolerance - cm3/1000s. : +- 6.0 - Aneroid pressure
Rated speed rpm	: 150	- hPa : - - Rated speed rpm : 500
CRT mm min.	: > 5.80	- Del. quantity - cm3/1000 strokes : 144.0 - cm3/1000 strokes : +- 1.0
Rated speed rpm	: 275	- Check tolerance - cm3/1000s. : +- 4.0
TORQUE CONTROL	1	-
Rated speed rpm rack travel mm Tolerance mm	: 12.35	Rack travel in mm : 11.30 Rated speed rpm : 995 Tolerance 1/min : +- 5
ANEROID/ALTITUDE COMPENSATOR TEST		- Toterance Philips
SETTING	1	STARTING FUEL DELIVERY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1500	Rated speed rpm : 100 rack travel mm : 10.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 155.0 cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm		
Rated speed rpm	+	LOW IDLE
•	j	Rated speed rpm : 250
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 320 : 10.50 : + 0.20 : 525 : 11.75 : + 0.05	Del. quantity cm3/1000 strokes : 16.0 cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.06.96 : ISO 4113 Test oil

Combination No. : 0 402 676 833

Injection pump

Pump designation : PE6P120A320RS7426 EP type number : 0 412 626 958

Governor

Governer design. : RSV300...1100P1A650

: 0 421 833 567 Governer no.

Cust. part No. : 3826502 PO2 v.05/96

Customer-spec. information

Customer : VM

Motor : TWD 1031 E : 235.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 : +- 0.1 Tolerance bar

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar

Tolerance bar : \leftarrow 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 4.45 : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

: +- 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.00

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 292.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed cm3/1000 strokes	: 7.0
Check tolerance cm3/1000s.	: 11.0
Rated speed rpm	: 300
Rack travel in mm Tolerance mm Del. quantity	: 5.00 : + 0.10
cm3/1000 strokes cm3/1000 strokes	: 22.0 : + 3.0
Check tolerance cm3/1000s.	: +- 6.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 8.0
(B) SETTING OF IN. WITH GOVERNOR	
GUIDE SLEEVE POSIT	TION
GUIDE SLEEVE POSIT	TION : 800
GUIDE SLEEVE POSIT	TION : 800
GUIDE SLEEVE POSIT Rated speed rpm Rack travel in mm	: 800 : 0.50 : ← 0.20
GUIDE SLEEVE POSITIRATED Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x	: 800 : 0.50 : ← 0.20
GUIDE SLEEVE POSITE Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 800 : 0.50 : + 0.20 : 6.00 : AT FULL LOAD STOP : 1050 : 1500 : 292.0
GUIDE SLEEVE POSITE Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity	: 800 : 0.50 : +- 0.20 : 6.00 : AT FULL LOAD STOP : 1050 : 1500

Check tolerance cm3/1000S.	: 11.0
CONTROL LEVER	
control lever position degree tolerance degree	
control lever position degree tolerance degree	: 113.0 : + 4.0
RATED SPEED	
rack travel mm Rated speed rpm Tolerance 1/min	: 11.00 : 1080 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1150 : +- 15
rack travel mm Tolerance mm	: 0.85 : + 0.55
Rated speed rpm	: 1260
LOW IDLE	: 1260
	: 81.0
LOW IDLE control lever position degree	: 81.0 : +- 4.0 : 31.0
LOW IDLE control lever position degree tolerance degree control lever position degree	: 81.0 : ← 4.0 : 31.0 : ← 4.0
control lever position degree tolerance degree control lever position degree tolerance degree tolerance degree	: 81.0 : +- 4.0 : 31.0 : +- 4.0
control lever position degree tolerance degree control lever position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm	: 81.0 : +- 4.0 : 31.0 : +- 4.0
control lever position degree tolerance degree control lever position degree tolerance degree tolerance degree Setting point w/o	: 81.0 : + 4.0 : 31.0 : + 4.0 out bumper spring : 300 : 4.50

Rated speed rpm : 1050 rack travel mm : 12.00 Tolerance mm : + 0.05

Rated speed rpm : 700 rack travel mm : 12.00 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 12.00
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 7.70
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 1030 rack travel mm : 4.00 Tolerance mm : + 0.20

Pressure hPa : 270
rack travel mm : 0.25
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 321.0 cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed cm3/1000 strokes : 9.0

Check tolerance cm3/1000s. : 13.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 185.0

cm3/1000 strokes : +- 1.0 Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1080
Tolerance 1/min : +- 5

LOW IDLE

300 Rated speed rpm : Del. quantity cm3/1000 strokes : 22.0 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed 5.0 cm3/1000 strokes : Check tolerance cm3/1000s.: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.05.96 Test oil : ISO 4113

Combination No. : 0 402 896 014

Injection pump

Pump designation : PE6P120A720RS8029 EP type number : 0 412 826 028

Governor

Governer design. : RE30

Governer no. : 0 421 890 021

Cust. part No. : 1361126

Customer—spec. information Customer : SCANIA Motor : DSC1124

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 6₺₩ 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

Pump—specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance $^{\bullet}NW$: +- 0.75

Start of delivery mark

Barrel no. : 1

Vibration

damper

(RoBo diaphragm) : 3.1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1: 0

Setting point (P, R and H pump)

Uact V : 3.100 CRT mm : 13.00 Tolerance mm : +/- 0.05

Check

tolerance mm : +/- 0.10

Check value (P, R and H pump)

Uact V : 1.700
CRT mm : 6.15
Tolerance mm : +/- 0.25
Check
tolerance mm : +/- 0.30

Setting point (M pump)

Uact V : 3.100
CRT mm : 12.50
Tolerance mm : +/- 0.05
Check
tolerance mm : +/- 0.10

Check value (M pump)

Uact V : 1.700
CRT mm : 5.50
Tolerance mm : +/- 0.25
Check
tolerance mm : +/- 0.30

Stop position

Uact V : Value with

deenergised adjusting magnet and control rod in

stop position.

CRT mm : 0.75
Tolerance mm : +/- 0.25

Check

tolerance mm : ± -0.35

ENGINE-SPEED SENSOR (ALL P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60
Amplitude V: 1.4
Tolerance V: +/- 0.6
Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

cm3/1000s.

Rated speed rpm 700 3.500 Uact V Del. quantity cm3/1000 strokes : 340.0 cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed cm3/1000 strokes : 8.0 Check tolerance

FUEL DELIVERY CHARACTERISTICS

12.0

Rated speed rpm : 900
Uact V : 3.500
Del. quantity
cm3/1000 strokes : 309.0
Check tolerance
cm3/1000s. : +- 6.0

TEST POINT L1

250 Rated speed rpm 1.640 Uact V Tolerance Volt : +- 0.060Check tolerance Volt : + - 0.060Del. quantity cm3/1000 strokes : 16.0 cm3/1000 strokes : +-3.0 Spreed cm3/1900 strokes : 4.0 Check tolerance 8.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 3.00

Uact V : 3.000
Del. quantity
cm3/1000 strokes : 245.0
cm3/1000 strokes : + 20.0

Check tolerance cm3/1000s. : +- 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 30.05.96 : ISO 4113

Combination No. : 0 402 946 023

Injection pump

Pump designation : PES6P120A320RS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265-2

Governer no.

: 0 421 801 808

Cust. part No. : 1385102

Customer-spec. information Customer : SCANIA : DSC 9.15 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 : + 1.5 bar Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 4.30 : + 0.05 Prestroke mm Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : +- 0.20

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: + - 0.30Tolerance

Check

tolerance °NW : **←** 0.50

Start of delivery blocking

: +- 0.30 Tolerance

Check

tolerance °NW : + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm Tolerance mm	12.40 : +- 0.05	+ Rated speed rpm : 490 + guide sleeve + travel mm : 4.50 + Tolerance mm : + 0.10
Del. quantity cm3/1000 strokes	: 287.0	Rated speed rpm : 1129 guide sleeve
cm3/1000 strokes	: + 1.0	travel mm : 5.50 Tolerance mm : + 0.10
Check tolerance cm3/1000S.	: +- 9.0	Rated speed rpm : 1600 guide sleeve
Spreed cm3/1000 strokes	: 8.0	travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s.	: 14.0	GUIDE SLEEVE POSITION
Rated speed rpm	: 250	Rated speed rpm : 600
Rack travel in mm Tolerance mm	: 6.80 : +- 0.10	Rack travel in mm : 16.00 Tolerance mm : +- 1.00
Del. quantity cm3/1000 strokes cm3/1000 strokes		FULL LOAD DELIVERY AT FULL LOAD
Check tolerance cm3/1000S. Spreed	: +- 6.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500
cm3/1000 strokes Check tolerance	: 4.0	Del. quantity cm3/1000 strokes : 287.0
cm3/1000s.	: 8.0	cm3/1000 strokes : +- 1.0 Check tolerance
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	- cm3/1000s. : + 9.0 - Spreed - cm3/1000 strokes : 8.0 - Check tolerance - cm3/1000s. : 14.0
GUIDE SLEEVE TRAV	EL	
Rated speed rpm guide sleeve travel mm	: 250 : 1.48	CONTROL LEVER
Tolerance mm Rated speed rpm	: + 0.20 : 1055	control lever position degree : 38.0 tolerance degree : + 4.0
guide sleeve travel mm Tolerance mm	: 4.82 : + 0.15	control lever position degree : 106.0
Rated speed rpm	: 970	tolerance degree : +- 4.0
guide sleeve travel mm Tolerance mm	: 4.50 : + 0.10	+ RATED SPEED + rack travel mm : 11.40
Rated speed rpm guide sleeve	: 358	Rated speed rpm : 1045 Tolerance 1/min : + 5
travel mm Tolerance mm	: 3.50 : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1220 Tolerance 1/min : + 15

LOAD STOP

rack travel mm Tolerance mm Rated speed rpm	: ← 0.50
LOW IDLE	
control lever position degree tolerance degree	: 85.0 : +- 4.0
control lever position degree tolerance degree	: 23.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 6.80 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 350 : + 20
Rated speed rpm	: 150
CRT mm min.	: > 10.20
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.40 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.40 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.40 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm	: – : 500 : 10.00

Tolerance mm	: ÷ 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 290 : 10.60 : +- 0.15
Pressure hPa rack travel mm Tolerance mm	: 800 : 11.90 : ← 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: < 170 : > 100
Check speed 1/min Check	: < 190
speed 1/min	: > 80
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes cm3/1000 strokes cm3/1000 strokes Check tolerance cm3/1000s. BREAKAWAY	: 1500 : 1000 : 280.0 : + 4.0 : + 9.0 : - 500 : 172.0 : + 1.0 : + 6.0
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1045
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.50 : + 0.50

Del. quantity cm3/1000 strokes : 270.0 cm3/1000 strokes : + 20.0

Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

250 Rated speed rpm :

Del. quantity cm3/1000 strokes : 25.0 cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s. 6.0

Spreed

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.06.96 Edition Test oil : ISO 4113

Combination No. : 0 403 486 110

Injection pump

Pump designation : PES6MW100/321RS1192

: -1

: 0 413 406 242 EP type number

Governer design. : RSV300...1300MW0A802

: 0 420 085 132 Governer no.

Cust. part No. : 3-7493

Customer-spec. information

: MAN Customer

. D0826LE40 Motor Power KW : 199.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 : **←** 1.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

3.55 Prestroke mm

Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm: 10.50

: +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasina : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

Barrel no. : 1

BASIC SETTING

1300 Rated speed rpm :

Rack travel in mm: 13.05 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 139.0

cm3/1000 strokes : - 1.0

Check tolerance cm3/1000s.	: +- 4.0	control lever
Spreed cm3/1000 strokes	: 4.0	tolerance degr
Check tolerance	**************************************	+ RATED SPEED
cm3/1000S.	: 7.5	rack travel mm Rated speed rp
Rated speed rpm	: 300	Tolerance 1/mi
Rack travel in mm	: 4.80	rack travel mm Rated speed rp
Tolerance mm Del. quantity	: + 0.10	Tolerance 1/mi
cm3/1000 strokes	: 15.0	rack travel mm
cm3/1000 strokes	: +- 2.0	† Tolerance mm
Check tolerance cm3/1000s.	: + 4.5	Rated speed rp
Spreed		+
cm3/1000 strokes	: 3.5	LOW IDLE
Check tolerance cm3/1000S.	: 5.5	+ LOW IDEE
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	control lever position degre tolerance degr Testing:
GUIDE SLEEVE POSI	TTON .	+ Rated speed rp
doing percite 1 doi:		+ rack travel mm
Rated speed rpm	: 800	† Tolerance mm
Rack travel in mm		rack travel mm
Tolerance mm	: + 0.35	Rated speed rp Tolerance 1/mi
governor spring pre-tension		+ Rated speed rp
click setting x	: 5.00	+ Rated speed (p
		CRT mm min.
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm	: 1300	TONGOL CONTINCE
Aneroid pressure		Rated speed rp
hPa Del. quantity	: -	+ rack travel mm + Tolerance mm
cm3/1000 strokes	: 139.0	+ Total Giller inni
cm3/1000 strokes		+ Rated speed rp
Check tolerance cm3/1000s.	: +- 4.0	rack travel mm
Spreed	7.0	- rocerative min
cm3/1000 strokes	: 4.0	+ Rated speed rp
Chack tolerance cm3/1000s.	: 7.5	+ rack travel mm + Tolerance mm
		‡
CONTROL LEVER		Ì
CONTROL LEVER		T

: 115.0 : + 4.0
: 12.00 : 1355 : +- 5
: 4.00 : 1475 : ← 15
: 1.00 : +- 0.70 : 1650
: 82.0 : + 4.0
: 300 : 4.80 : +- 0.10
: > 2.00 : 430 : + 30
: 100
: > 19.00
: 1300 : 13.05 : +- 0.05
: 800 : 13.05 : + 0.10
: 500 : 13.05 : + 0.10

FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 800 Rated speed rpm Del. quantity cm3/1000 strokes : 152.0 cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 5.0 Spreed cm3/1000 strokes 6.0 Check tolerance cm3/1000s. 9.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 156.0 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s.5.0 : +-BREAKAWAY Rack travel in mm : 12.00 Rated speed rpm : 1355 Tolerance 1/min STARTING FUEL DELIVERY 100 Rated speed rpm rack travel am 20.00 : +- 1.00 Tolerance mm Del. quantity cm3/1000 strokes : 145.0 cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. 8.0 LOW IDLE 300 Rated speed rpm Del. quantity 15.0 cm3/1000 strokes : cm3/1000 strokes 2.0 Check tolerance cm3/1000S. 4.5 Spreed cm3/1000 strokes : 3.5

cm3/1000s. : 5.5

End of test specification sheet

Check tolerance

M02

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.04.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 648 602

Injection pump

Pump designation : PE8P110A320RS7398 EP type number : 0 412 618 800

Governor

Governer design. : RQV300...900PA1252K : 0 421 815 484 Governer no.

Cust. part No. :

Customer-spec. information Customer : TATRA : T3B-928.60 Motor

: 255.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp, °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

5.05 Prestroke mm : **←** 0.05 Tolerance mm Check

tolerance mm : **←** 0.10

Rack travel in mm: 13.00 Tolerance mm : + 1.00

: 1-8-5-4-7 Firing order : - 2- 3- 6

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.30 Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no.

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm : 14.00 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 191.0

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.: +-4.0

M03

	+	
Spreed cm3/1000 strokes	: 5.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: 9.0	Rated speed rpm : 900 Aneroid pressure
Rated speed rpm	: 250	hPa : 1500 Del. quantity
Tolerance mm Del. quantity	: + 0.10	cm3/1000 strokes : 191.0 cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes cm3/1000 strokes		cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000S.	: +- 6.0	cm3/1000 strokes : 5.0 Check tolerance
Spreed cm3/1000 strokes	+	cm3/1000s. : 9.0
Check tolerance cm3/1000S.	: 12.0	
(2)	†	CONTROL LEVER
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	control lever position degree : 65.0 tolerance degree : +- 4.0
		tolerance degree : +- 4.0
GUIDE SLEEVE TRAV	/EL +	control lever
Rated speed rpm guide sleeve	: 300	position degree : 119.0 tolerance degree : +- 4.0
travel mm Tolerance mm	: 1.63 : + 0.20	RATED SPEED
Rated speed rpm guide sleeve	: 958	rack travel mm : 13.00 Rated speed rpm : 945 Tolerance 1/min : +- 5
travel mm Tolerance mm	: 8.79 : + 0.15	rack travel mm : 4.00
Rated speed rpm guide sleeve	: 777	Rated speed rpm : 1065 Tolerance 1/min : +- 15
travel mm Tolerance mm	: 6.70 : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm	+	Rated speed rpm : 1150
guide sleeve travel mm	: 3.73	
Tolerance mm	: + 0.25	LOW IDLE
Rated speed rpm guide sleeve	+	control lever
travel mm Tolerance mm	: 13.50 + : + 0.50 +	position degree : 70.0 tolerance degree : +- 4.0
CHINE SIEEVE DOST	TION	control lever position degree : 16.0
GUIDE SLEEVE POSI Rated speed rpm	+	tolerance degree : +- 4.0
Rack travel in mon	+	Testing:
Tolerance mm		Rated speed rpm : 250 Tolerance mm : +- 0.10

Rated speed rpm	: 150	+ Check speed 1/min : < 190
CRT mm min.	: > 6.00	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 350	Aneroid pressure hPa : 1500
TORQUE CONTROL		Rated speed rpm : 600 Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 900 : 14.00 : ← 0.05	cm3/1000 strokes : 198.0 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.10 : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 500
Rated speed rpm rack travel mm Tolerance mm	: 300 : 12.60 : ← 0.20	Del. quantity - cm3/1000 strokes : 129.0 - cm3/1000 strokes : + 2.0 - Check tolerance - cm3/1000s. : + 4.0
ANEROID/ALTITUDE COMPENSATOR TEST		BREAKAWAY
SETTING		Rack travel in mm : 13.00
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1500	Rated speed rpm : 945 Tolerance 1/min : +- 5
MEASUREMENT		STARTING FUEL DELIVERY
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 900 : 9.05 : ← 0.20	Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 255.0
Rated speed rpm	: 900	cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm	: 375 : 10.15 : ← 0.15	+ cm3/1000s. : + 24.0
Pressure hPa rack travel mm Tolerance mm	: 750 : 12.75 : ← 0.05	LOW IDLE Rated speed rpm : 250
START CUT-OUT Rated speed rpm Rated speed rpm		Del. quantity + cm3/1000 strokes : 26.0 + cm3/1000 strokes : + 3.0 + Check tolerance + cm3/1000s. : + 6.0
Check speed 1/min	: > 80	Spreed : 8.0 cm3/1000 strokes : 8.0 check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Test oil : 24.05.96

Combination No. : 0 402 946 303

Injection pump

Pump designation : PES6P120A320RS8515 EP type number : 0 412 926 211

Governor

Governer design. : RQV250...900PA1223K

Governer no. : 0 421 815 971

Cust. part No. :

Customer-spec. information Customer : PERKINS : EAGLE410TX Motor Power KW : 298.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 084

Inlet press. bar : 3.0
Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.10 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.00

Firing order : 1- 4- 2- 6- 3-

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm: 14.80

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Tolerance mm : + 0.05 Del. quantity cm3/1000 strokes : 289.5	+ guide sleeve + travel mm : 13.50 + Tolerance mm : + 0.50
cm3/1000 strokes : +- 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1105 Rack travel in mm : 17.00
Spreed cm3/1000 strokes : 5.0	Tolerance mm : + 2.00
Check tolerance cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	+ Rated speed rpm : 850 + Aneroid pressure + hPa : 1300 + Del. quantity
Rack travel in mm : 2.70 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 25.0	cm3/1000 strokes : 289.5 cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
<pre>cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0</pre>	Spreed + cm3/1000 strokes : 5.0 + Check tolerance
Spreed cm3/1000 strokes : 8.0 Check tolerance	+ cm3/1000s. : 9.0 +
cm3/1000s. : 12.0	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ control lever + position degree : 117.0
WITH GOVERNOR	tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL	
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 2.23	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 2.23 Tolerance mm : + 0.20 Rated speed rpm : 958	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.80 Rated speed rpm : 945
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 2.23 Tolerance mm : + 0.20	tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.80 Rated speed rpm : 945 Tolerance 1/min : + 15 rack travel mm : 4.00 Rated speed rpm : 1070 Tolerance 1/min : + 5 rack travel mm : 0.50
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 2.23 Tolerance mm : + 0.20 Rated speed rpm : 958 guide sleeve travel mm : 8.79 Tolerance mm : + 0.15 Rated speed rpm : 676	tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.80 Rated speed rpm : 945 Tolerance 1/min : + 15 rack travel mm : 4.00 Rated speed rpm : 1070 Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 2.23 Tolerance mm : + 0.20 Rated speed rpm : 958 guide sleeve travel mm : 8.79 Tolerance mm : + 0.15 Rated speed rpm : 676	tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.80 Rated speed rpm : 945 Tolerance 1/min : + 15 rack travel mm : 4.00 Rated speed rpm : 1070 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1150
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 2.23 Tolerance mm : + 0.20 Rated speed rpm : 958 guide sleeve travel mm : 8.79 Tolerance mm : + 0.15 Rated speed rpm : 676 guide sleeve travel mm : 5.80 Tolerance mm : + 0.25 Rated speed rpm : 430	tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.80 Rated speed rpm : 945 Tolerance 1/min : + 15 rack travel mm : 4.00 Rated speed rpm : 1070 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1150 LOW IDLE
GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 2.23 Tolerance mm : + 0.20 Rated speed rpm : 958 guide sleeve travel mm : 8.79 Tolerance mm : + 0.15 Rated speed rpm : 676 guide sleeve travel mm : 5.80 Tolerance mm : + 0.25 Rated speed rpm : 430	tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.80 Rated speed rpm : 945 Tolerance 1/min : + 15 rack travel mm : 4.00 Rated speed rpm : 1070 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1150

Rated speed rpm	: 300	- Check - speed 1/min : < 240
rack travel mm		
Tolerance mm	: ← 0.10	- FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 200	
CRT mm min.	: > 4.20	- Aneroid pressure - hPa : 1300 - Rated speed rpm : 600
Rated speed rpm	: 330	- Rated speed rpm : 600 - Del. quantity - cm3/1000 strokes : 314.0
		- cm3/1000 strokes : + 2.0
TORQUE CONTROL		Check tolerance cm3/1000s. : +- 5.0
Rated speed rpm	: 850	-
rack travel mm		- Aneroid pressure
Tolerance mm		- hPa : -
	+	- Rated speed rpm : 500
Rated speed rpm	: 600	- Del. quantity
rack travel mm	: 14.10 	- cm3/1000 strokes : 161.0
Tolerance mm	: ← 0.10 +	- cm3/1000 strokes : +- 1.0
	+	- Check tolerance
	+	- cm3/1000s. : +- 4.0
ANEROID/ALTITUDE	†	•
COMPENSATOR TEST	†	DDEAVALIAY
	1	- BREAKAWAY
SETTING	Ţ	_
	4	- Rack travel in mm : 13.80
Rated speed rpm	: 850	- Rated speed rpm : 945
Pressure hPa		- Tolerance 1/min : + 15
rack travel mm		• • • • • • • • • • • • • • • • • • •
Tolerance mm	: +- 0.05	
MEASUREMENT	+	- STARTING FUEL DELIVERY
	+	-
Pressure hPa	: - +	- Rated speed rpm : 100
Rated speed rpm		- Del. quantity
rack travel mm		- cm3/1000 strokes : 225.0
Tolerance mm	: ← 0.20 +	- cm3/1000 strokes : + 20.0
Dakad amazd	, ₀₅₀ †	- Check tolerance
Rated speed rpm	+	- cm3/1000s. : +- 25.0
Pressure hPa	: 425	-
rack travel mm	: 10.00	•
Tolerance mm	: +- 0.05	
.	+	- LOW IDLE
Pressure hPa	: 820	Poted aread 700
rack travel mm	: 12.60	Rated speed rpm : 300
Tolerance mm	: +- 0.20 †	Del. quantity
	†	- cm3/1000 strokes : 25.0 - cm3/1000 strokes : +- 3.0
CTART CUT OUT		
START CUT-OUT	†	- Check tolerance - cm3/1000s. : +- 6.0
Datad cased	. \ 100	- Cm3/10005. : +- 6.0 - Spreed
Rated speed rpm		- spreed - cm3/1000 strokes : 8.0
Rated speed rpm	: < 230	Check tolerance
Check	Ī	- cm3/1000s. : 12.0
uneck speed 1/min	:> 80	. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.05.96 Test oil : ISO 4113

Combination No. : 0 401 876 801

Injection pump

Pump designation : PE6P12OA32ORS3375 EP type number : 0 411 826 817

Governor

Governer design. : RSV250...900POA646 Governer no. : 0 421 833 562

Cust. part No. : 3826154 PO1 v.11/95

Customer-spec. information Customer : PENTA Motor : TWD 710P Power KW : 153.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damoer

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 240 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.65 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance *NW : + 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 8.15 Tolerance mm: + 0.05 Del. quantity cm3/1000 strokes: 155.0	Check tolerance cm3/1000s. : + 4.0 Spreed cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
cm3/1000 strokes : +- 1.0	
Check tolerance cm3/1000s. : +- 4.0	CONTROL LEVER
Spreed cm3/1000 strokes : 5.0	position degree : 37.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	<pre>control lever position degree : 87.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 250	RATED SPEED
Rack travel in mm: 4.80 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 23.0	rack travel mm : 7.15 Rated speed rpm : 920 Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0 Spreed	rack travel mm : 4.00 Rated speed rpm : 955 Tolerance 1/min : +- 15
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1050
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 69.0 tolerance degree : +- 4.0
Rated speed rpm : 800 + Rack travel in mm : 0.50 +	control lever position degree : 19.0
Tolerance mm : + 0.20	tolerance degree : +- 4.0
governor spring pre-tension +	Setting point w/out bumper spring
click setting x : 2.00	Rated speed rpm : 250 rack travel mm : 4.30
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 250 rack travel mm : 4.80 Tolerance mm : +- 0.10
cm3/1000 strokes : 155.0 cm3/1000 strokes : + 1.0	rack travel mm : 2.00 Rated speed rpm : 335 Tolerance 1/min : +- 30

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 8.15 Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm: 7.15
Rated speed rpm: 920
Tolerance 1/min: + 5

LOW IDLE

Rated speed rpm : 250
Del. quantity
cm3/1000 strokes : 23.0
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 5.0
Spreed
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20.05.96 : ISO 4113

Combination No. : 0 401 878 140

Injection pump

Pump designation : PE8P120A520/5RS427

EP type number : 0 411 828 048

Governor

Governer design. : RSUV300...900POA320

Governer no.

: 0 421 829 107

Cust. part No. :

Customer-spec. information

Customer : MWM

: TBD 234 V8 Motor

Power KW

: 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test lines

: 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.85 : +- 0.05

Tolerance mm Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

: 1-8-5-4-7 Firing order

: - 2- 3- 6

: 0-30-90-120-180 Phasing

: -210-270-300

: **←** 0.50 Tolerance

Check

tolerance °NW : **←** 0.75

Start of delivery mark

: + 0.50Tolerance

Check

tolerance °NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm :

750

Rack travel in mm:

13.75

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes :

250.0

M14

cm3/1000 strokes : + 1.0 +	-
Check tolerance cm3/1000s. : +- 4.0	- CONTROL LEVER
Spreed cm3/1000 strokes : 5.0	control lever position degree : 119.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	- RATED SPEED - rack travel mm : 12.70
Rated speed rpm : 300	Rated speed rpm : 945 Tolerance 1/min : + 5
Rack travel in mm : 5.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 23.0 cm3/1000 strokes : + 3.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 980 Tolerance 1/min : + 15 rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000s. : +- 6.0 +- 6.0	Rated speed rpm : 1130
Check tolerance cm3/1000s. : 12.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 76.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 300 rack travel mm : 5.10
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Testing:
governor spring pre-tension click setting x : 3.80	Rated speed rpm : 300 rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 350
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : + 30
Rated speed rpm : 750 Aneroid pressure hPa : -	TORQUE CONTROL
Del. quantity cm3/1000 strokes : 250.0 cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	Dimension a mm : 3.90 Rated speed rpm : 750 rack travel mm : 13.75 Tolerance mm : + 0.05
Spreed cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 900 rack travel mm : 13.75 Tolerance mm : +- 0.10
	Rated speed rpm : 450

Tolerance mm : + 0.10

Rated speed rpm : 280 rack travel mm : 15.20 Tolerance mm : + 0.30

BREAKAWAY

Rack travel in mm : 12.70
Rated speed rpm : 945
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 23.0

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : + 6.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.05.96 Test oil : ISO 4113

Combination No. : 0 402 076 804

Injection pump

Pump designation : PES6P120A720RS3340

EP type number : 0 412 026 773

Governor

Governer design. : RSV650...1100P8A566

: -2

Governer no. : 0 421 833 559

Cust. part No. :

Customer-spec. information

Customer

: NH

Power KW

: 162.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : +- 0.50

Start of delivery blocking

Check

tolerance $^{\circ}NW$: \leftarrow 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1025

Rack travel in mm: 10.70

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 140.5	Check tolerance : 9.0
cm3/1000 strokes : +- 1.0	Ţ
Charle to Lorenzo	CONTROL LEVER
Check tolerance cm3/1000s. : +- 6.0	control lever position degree : 93.0
Spreed cm3/1000 strokes : 5.0	tolerance degree : +- 4.0 + RATED SPEED
Check tolerance	+
cm3/1000s. : 9.0	+ rack travel mm : 4.00 + Rated speed rpm : 1105
Rated speed rpm : 650	ASSEMBLY GOVERNOR SETTING
Rack travel in mm : 5.10	T Rated speed rpm : 1072
Tolerance mm : +- 0.10 Del. quantity	rack travel mm : 9.70
cm3/1000 strokes : 33.0	Rated speed rpm : 1100
cm3/1000 strokes : +- 3.0	Tolerance 1/min : +- 5 rack travel mm : 4.00
Check tolerance cm3/1000s. : +- 6.0	+ rack travet mm : 4.00
Spreed	rack travel mm : 0.85
cm3/1000 strokes : 8.0 - Check tolerance	Tolerance mm : + 0.55 Rated speed rpm : 1350
cm3/1000s. : 12.0	T Rated Speed (pill : 1330
	Rated speed rpm : 1073
(B) SETTING OF INJECTION PUMP	rack travel mm : 9.70
WITH GOVERNOR	Rated speed rpm : 1101
•	+ Tolerance 1/min : +- 5 + rack travel mm : 4.00
	+ rack travet mm : 4.00
GUIDE SLEEVE POSITION -	rack travel mm : 0.85
Rated speed rpm : 800	Tolerance mm : +- 0.55
nated speed i pir	Rated speed rpm : 1074
Rack travel in mm: 0.50 - Tolerance mm: +- 0.20 -	rack travel mm : 9.70
- Cterance iiii	Rated speed rpm : 1102
governor spring	+ Tolerance 1/min : +- 5 + rack travel mm : 4.00
pre-tension - click setting x : 3.00 -	f rack travel mm : 4.00
-	rack travel mm : 0.85
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.55
FOLL LOAD DELIVERY AT FOLL LOAD STOP	Rated speed rpm : 1075
Rated speed rpm : 1025 - Aneroid pressure -	rack travel mm : 9.70
hPa : 1600 -	Rated speed rpm : 1193
Del. quantity -	Tolerance 1/min : +- 5
cm3/1000 strokes : 140.5 - cm3/1000 strokes : +- 1.0 -	rack travel mm : 4.00
Check tolerance -	rack travel mm : 0.85
cm3/1000s. : +- 6.0	Tolerance mm : +- 0.55
cm3/1000 strokes : 5.0	Rated speed rpm : 1076

rack travel mm	: 9.70	+ Rated speed rpm : 500 + Pressure hPa : 1600
Rated speed rpm	. 110/	rack travel mm : 11.45
		T .
Tolerance 1/min		† Tolerance mm : + 0.15
rack travel m m	: 4.00	†
	0.05	+ MEASUREMENT
rack travel mm	: 0.85	†
Tolerance mm	: +- 0.55	+ Pressure hPa : -
		Rated speed rpm : 500
Rated speed rpm	: 1077	+ rack travel mm : 7.60
rack travel mm	: 9.70	+ Tolerance mm : +- 0.15
		+
Rated speed rpm	: 1105	+ Rated speed rpm : 500
Tolerance 1/min	: +- 5	+
rack travel mm	: 4.00	+ Pressure hPa : 840
		+ rack travel mm : 10.70
rack travel mm	: 0.85	+ Tolerance mm : + 0.10
Tolerance mm		1
TOTAL MAIN	0.33	<u> </u>
		START CUT-OUT
LOW IDLE		I START COT OUT
LOW IDEE		Rated speed rpm : > 100
		T Rated Speed (pill . > 100
		Charle
control lever	74.0	Check
position degree		+ speed 1/min : > 80
tolerance degree	: +- 4.0	†
Setting point w/c	out bumper spring	+ FUEL DELIVERY CHARACTERISTICS
		†
Rated speed rpm		+ Aneroid pressure
rack travel mm	: 4.60	† hPa : 1600
		+ Rated speed rpm : 800
Testing:		+ Del. quantity
		+ cm3/1000 strokes : 165.5
Rated speed rpm	: 650	+ cm3/1000 strokes : +- 3.0
rack travel mm	: 5.10	+ Check tolerance
Tolerance mm	: +- 0.10	+ cm3/1000s. : +- 6.0
		+
		+ Aneroid pressure
TORQUE CONTROL		+ hPa : -
7011402 001111102		Rated speed rpm : 500
Rated speed rpm	: 1025	Del. quantity
rack travel mm	: 10.70	- cm3/1000 strokes : 80.0
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : + 1.0
(Oteranice (III)		Check tolerance
5 • • • • • • • • • • • • • • • • • • •		- cm3/1000s. : +- 4.0
UNTAK COASS SOT	• 800	T 11111/111111111111 1 TT 9.0
Rated speed rpm	: 800	
rack travel mm	: 11.45	+
		† · · · · · · · · · · · · · · · · · · ·
rack travel mm Tolerance mm	: 11.45 : + 0.10	
rack travel mm Tolerance mm Rated speed rpm	: 11.45 : +- 0.10 : 700	+
rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY
rack travel mm Tolerance mm Rated speed rpm	: 11.45 : +- 0.10 : 700	STARTING FUEL DELIVERY
rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel num : 20.50
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel nm : 20.50 Tolerance mm : + 0.50
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 95.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 95.0 cm3/1000 strokes : + 15.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 95.0 cm3/1000 strokes : + 15.0 Check tolerance
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST	: 11.45 : +- 0.10 : 700 : 11.50	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 95.0 cm3/1000 strokes : + 15.0

LOW IDLE

Rated speed rpm : 650

Del. quantity
cm3/1000 strokes : 33.0
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 14,05,96 : ISO 4113

Combination No.

: 0 400 876 367

Injection pump

Pump designation : PES6A90D410RS2710-1

EP type number

: 0 410 896 084

Governor

Governer design. : RSV350...750A0C2240

: -2L

Governer no.

: 0 420 232 558

Cust. part No. :

Customer-spec. information : MB-NFZ Customer : OM 366

Motor Power KW : 60.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.30 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

BASIC SETTING

700 Rated speed rpm :

12.20 Rack travel in mm: : **←** 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 64.5

cm3/1000 strokes : + 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

3.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 7.0

Rated speed rpm	: 350	† rack travel mm	
		Rated speed rpm Tolerance 1/min	
Rack travel in mm	n: 8.20	rack travel mm	
Tolerance mm	: + 0.10	+	
Del. quantity		rack travel mm	: 0.85
cm3/1000 strokes cm3/1000 strokes		+ Tolerance mm + Rated speed rpm	: + 0.55 : 900
Check tolerance	2.0	T Raced Speed 1 pill	. 700
cm3/1000s.	: 4.8	+ Rated speed rpm	: 752
Spreed		+ rack travel mm	: 11.20
cm3/1000 strokes	: 4.5	Poted speed ppm	: 786
Check tolerance cm3/1000s.	: 7.0	+ Rated speed rpm + Tolerance 1/min	
(1107 (0000)		+ rack travel mm	
		+	
(B) SETTING OF IN	JUECTION PUMP	+ rack travel mm	: 0.85
WITH GOVERNOR		+ Tolerance mm + Rated speed rpm	: +- 0.55 : 900
		T Rated speed (pill	. 700
		Rated speed rpm	: 753
FULL LOAD DELIVER	Y AT FULL LOAD STOP	+ rack travel mm	
Dated aread ann	: 700	+ Rated speed rpm	: 787
Rated speed rpm Aneroid pressure	: 700	Tolerance 1/min	
hPa	: -	+ rack travel mm	
Del. quantity		+	
cm3/1000 strokes		track travel mm	: 0.85
cm3/1000 strokes	: +- 0.5	+ Tolerance mm	: +- 0.55
Check tolerance cm3/1000S.	: 2.5	+ Rated speed rpm	: 900
Spreed	. += 2.3	Rated speed rpm	: 754
cm3/1000 strokes	: 3.0	+ rack travel mm	
Check tolerance		+	
cm3/1000s.	: 7.0	+ Rated speed rpm	
		+ Tolerance 1/min	
		rack travel mm	. 4.00
CONTROL LEVER		rack travel mm	: 0.85
_		+ Tolerance mm	: +- 0.55
control lever		+ Rated speed rpm	: 900
position degree tolerance degree		+ Rated speed rpm	: 755
toterance degree	. +- 4.0	rack travel mm	
		+	
ASSEMBLY GOVERNOR	SETTING	+ Rated speed rpm	
The first contract of the cont	. 750	+ Tolerance 1/min	
Rated speed rpm rack travel mm		† rack travel mm	: 4.00
TACK ETAVEL .4811	. 77.20	rack travel mm	: 0.85
Rated speed rpm	: 784	+ Tolerance mm	
Tolerance 1/min	: +- 4	+ Rated speed rpm	: 900
rack travel mm	: 4.00	†	
rack travel mm	: 0.85	+ LOW IDLE	····
Tolerance mm		+ LOW TOLL	
Rated speed rpm		+	
		+ control lever	-
Rated speed rpm	: 751	+ position degree	: 74.0

tolerance degree : + 4.0

Testing:

Rated speed rpm : 350 rack travel mm : 8.20 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed ipm : 400
Tolerance 1/min : + 20

Rated speed rpm : 100

CRT mm min. : > 19.50

SET IDLE AUXILIARY SPRING

Rated speed rpm : 100

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 12.20 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 16.70 Tolerance mm : +0.20

Del. quantity

cm3/1000 strokes : 83.0 cm3/1000 strokes : + 7.5 Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 9.0 cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : + 4.0

Spreed

cm3/1000 strokes : 4.5 Check tolerance

cm3/1000s. : 7.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 04.08.82 : ISO 4113

Combination No.

: 0 401 818 797

Injection pump

Pump designation : PE8P130A500/5LS3053

EP type number : 0 411 838 702

Governor

Governer design. :

Governer no.

Cust. part No.

Customer-spec. information

: SUEDBREMSE Customer

: TBD-602-V16 Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40

Tolerance °C : +- 2.0

Overflow valve : 1 413 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 443 022 assembly

Opening pressure

173.5

: +- 1.5 Tolerance bar

: 1 680 750 061 Test lines

Outside diameter : 8.0

x inside diameter : 2.0

M24

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +-

Prestroke mm 2.85

: +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 20.50

Tolerance mm : +- 0.50

Firing order : 1-6-8-2-4-7

: - 3- 5

Phasing : 0-45-90-90-135-180

: -225-315

Tolerance : +- 0.30

Check

: +- 0.50 tolerance °NW

BASIC SETTING

Del. quantity

349.0 cm3/1000 strokes :

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s.: +- 5.0

Spreed

cm3/1000 strokes :

5.0

Check tolerance

9.0 cm3/1000s.

Rated speed rpm 300

Del. quantity

cm3/1000 strokes : 52.0

cm3/1000 strokes : +- 4.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s : 12.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700

Aneroid pressure

hPa :

Del. quantity

cm3/1000 strokes : 349.0 cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 52.0 cm3/1000 strokes : +- 4.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16.10.85 Test oil : ISO 4113

Combination No. : 0 401 846 501

Injection pump

Pump designation : PE6P110A720RS380 EP type number : 0 411 816 126

Governor

Governer design. : RQV250...1000PA434

: -2

Governer no.

: 0 421 813 444

Cust. part No. :

Customer-spec. information Customer : HISPAVINSA : BSR 36 C Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Del. quantity cm3/1000 strokes : 191.0

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.5

Spreed

cm3/1000 strokes : 4.0

Check tolerance

cm3/1888s. 7.5

Rated speed rpm : 250	+ Spreed + cm3/1000 strokes : 4.0 + Check tolerance
Rack travel in mm : 8.60 Tolerance mm : + 0.10	+ cm3/1000s. : 7.5
Del. quantity cm3/1000 strokes : 27.0 cm3/1000 strokes : +- 3.0	CONTROL LEVER
Spreed cm3/1000 strokes : 4.0 Check tolerance	control lever position degree : 65.0 tolerance degree : +- 4.0
cm3/1000s. : 7.0	RATED SPEED
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 14.50 Rated speed rpm : 1045 Tolerance 1/min : +- 5
GUIDE SLEEVE TRAVEL Rated speed rpm : 250	rack travel mm : 4.00 Rated speed rpm : 1195 Tolerance 1/min : +- 15
guide sleeve travel mm : 1.15 Tolerance mm : +- 0.05	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50 + Rated speed rpm : 1300
Rated speed rpm : 1040 guide sleeve travel mm : 7.90	Trated speed rpm . 1500
Tolerance mm : +- 0.10	LOW IDLE
Rated speed rpm : 350 guide sleeve travel mm : 2.75 Tolerance mm : + 0.35	control lever position degree : 16.0 tolerance degree : + 4.0
Rated speed rpm : 430 guide sleeve	† + Testing: +
travel mm : 3.90 Tolerance mm : + 0.10	Rated speed rpm : 250 rack travel mm : 8.60 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	Rated speed rpm : 100
Rated speed rpm : 1100	CRT mm min. : > 10.10
Rack travel in mm : 16.50 Tolerance mm : + 1.30	Rated speed rpm : 415
FULL LOAD DELIVERY AT FULL LOAD STOP	ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 1000 - Aneroid pressure - 700 - 700	SETTING
Del. quantity cm3/1000 strokes : 191.0 cm3/1000 strokes : + 1.0 check tolerance cm3/1000s. : + 3.5	Rated speed rpm : 500 Pressure hPa : 700 rack travel mm : 15.55 Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa 500 Rated speed rpm : 13.25 rack travel mm Tolerance mm : ← 0.05

500 Rated speed rpm

310 Pressure hPa rack travel mm 13.80 : +- 0.10 Tolerance mm

445 Pressure hPa : 15.05 rack travel mm Tolerance mm : **←** 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 142.5 cm3/1000 strokes : \leftarrow 1.5

Check tolerance

cm3/1000s.: +- 4.0

BREAKAWAY

Rack travel in mm: 14.5 Rated speed rpm: 1045 14.50 Tolerance 1/min : +-

LOW IDLE

Rated speed rpm : 250 Del. quantity cm3/1000 strokes : 27.0 cm3/1000 strokes : +-3.0 Spreed cm3/1000 strokes : 4.0

Check tolerance cm3/1000s.

7.0 :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 11.05.95 : ISO 4113

Combination No. : 0 401 846 826

Injection pump

Pump designation : PE6P12OA32ORS3178 EP type number : 0 411 826 752

Governor

Governer design. : RQV250...1025PA921

: -2

Governer no.

: 0 421 813 785

Cust. part No. : 470930-P06 V. 06/92

Customer-spec. information

Customer : VOLVO-TRUCK Motor

: TD122FS : 287.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 046

Inlet press. ber : 1.5 Tolerance bar : + 0.1

Test nozzle holda

: 1 688 901 019 assembly

Opening pressure

: 208,5 Tolerance bar : + 1.5 Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 3.65 : ← 0.05 Prestroke mm Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 14.65

Tolerance mm : \leftarrow 0.05

Del. quantity		+	
cm3/1000 strokes	: 259.0	+	· · · · · · · · · · · · · · · · · · ·
		+ CONTROL LEVER	
cm3/1000 strokes	: ← 1.0	+	
		+ control lever	
Check tolerance		+ position degree	
cm3/1000s.	: +- 4.0	† tolerance degree	: - 4.0
		†	
Spreed	~ O	+ control lever	120.0
cm3/1000 strokes	; 2,0	+ position degree	: 120.0
Charle Antonous		tolerance degree	: +- 4.0
Check tolerance cm3/1000s.	. 00	T RATED SPEED	
CIID/ (UUUS.	. 9.0	I RATED SPEED	
Rated speed rpm	• 250	T rack travel mm	• 13.05
Makea speed i pii	. 230	Rated speed rpm	: 1060
		+ Tolerance 1/min	
Rack travel in mm	: 4.95	1	
Tolerance mm		+ rack travel mm	: 4.00
Del. quantity		+ Rated speed rpm	: 1155
cm3/1000 strokes	: 20.0	rack travel mm Rated speed rpm Tolerance 1/min	: +- 15
cm3/1500 strokes	: ← 2.5	+	
Check tolerance		† rack travel mm	: 0.50
cm3/1000S.	: 5.0	+ Tolerance mm	: +- 0.50
Spreed		+ Rated speed rpm	: 1250
cm3/1000 strokes		†	
Check tolerance		†	
cm3/1000S.	: 7.0	1	
		+ LOW IDLE	
(D) CETTAIC OF TH	LECTION DIMD	†	
(B) SETTING OF IN- WITH GOVERNOR	JECTION PUMP	T control lever	
MILL GOVERNOR		position degree	• 63.0
		tolerance degree	
·		totel and degree	• • • • • • • • • • • • • • • • • • • •
GUIDE SLEEVE POST	TION	+ control lever	
00274 022014		position degree	: 10,0
Rated speed rpm	: 1130	+ tolerance degree	
· · · · · · · · · · · · · · · · · · ·		ļ.	
Rack travel in mm	: 16.50	+ Testing:	
Tolerance mm	: +- 1.30	+	
		+ Rated speed rpm	
·····		† rack travel mm	
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	+ Tolerance mm	: +- 0.15
	700	+	16%
Rated speed rpm	: 700	+ Rated speed rpm	: 100
Aneroid pressure	4200	† coz:-	. > 4.40
hPa	: 1200	† CRT mm min.	: > 6.40
Del. quantity	: 259.0	Rated speed rpm	f 325
cm3/1000 strokes cm3/1000 strokes		T Rated speed rpm	: JEJ
Check tolerance	. — 1.0	I	
cm3/1000s.	: +- 40	1	
Spreed	+ · · · +.U	ANEROID/ALTITUDE	
กลั/1000 strokes	: 5.C	COMPENSATOR TEST	
Check tolerance		1	
cm3/10GOS.	: 9.0	+	
		SETTING	
		Ť	

Rated speed rpm : 500

Pressure hPa rack travel mm Tolerance mm	:	1200 14.05 + 0.05
MEASUREMENT		

Pressure hPa Rated speed rom 500 rack travel mm 10.40 : + 0.10Tolerance mm

500 Rated speed rpm

780 Pressure hPa 3.30 rack travel mm : +- 0.20 Tolerance mm

105 Pressure hPa rack travel mm 0.25 : + C.05 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

700 Rated speed rpm Del. quantity

cm3/1000 strokes : 169.0 cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

Rack travel in mm : 13.05 Rated speed rpm : Tolerance 1/min : +-

STARTING FUEL DELIVERY

100 Rated speed rpm 20.50 rack travel mm : +- 0.50 Tolerance mm Del. quantity 290.0 cm3/1000 strokes : cm3/1000 strokes : +- 20.0 Check tolerance

: + 24.0cm3/1000s.

LOW IDLE

Rated speed rpm 250 Del. quantity cm3/1000 strokes : 20.0 cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 Spreed cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. 7.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 11.05.95 Test oil : ISO 4113

Combination No. : 0 401 846 938

Injection pump

Pump designation : PE6P110A320RS3266 EP type number : 0 411 816 777

Governor

Governer design. : RQV300...1300PA996

: -1K

Governer no.

: 0 421 815 278

Cust. part No. : 420803-P05 V. 03/95

Customer-spec. information

Customer : VOLVO-TRUCK

Motor Power KW : TD63E

: 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : + 2.0 Tolerance °C

Overflow valve : 2 417 413 046

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.52 : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 8.60 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: +~ 0.30 Tolerance

Check

tolerance *NW : + 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 780

Rack travel in mm: 10.45 Tolerance mm : + 0.05

NO4

Del. quentity cm3/1000 strokes	: 105.0 +	Rated speed rpm : 1580 guide sleeve
cm3/1000 strokes	: +- 1.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s.	: + 3.0	GUIDE SLEEVE POSITION
Spreed cm3/1000 strokes	: 5.0	Rated speed rpm : 1470
Check tolerance cm3/1000s.	: 9.0	Rack travel in mm : 9.00 Tolerance mm : + 3.00
Rack travel in mm	5.50	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm		Rated speed rpm : 780 Aneroid pressure
(B) SETTING OF IN WITH GOVERNOR	UECTION PUMP	hPa : 1200 Del. quantity cm3/1000 strokes : 105.0 cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAV	EL +	Check tolerance cm3/1000S. : +- 3.0 Spreed
Rated speed rpm guide sleeve	+	cm3/1000 strokes : 5.0 Check tolerance
travel mm Tolerance mm	: 1.50 : + 0.25	cm3/1000s. : 9.0
Rated speed rpm guide sleeve	: 1374	CONTROL LEVER
travel mm Tolerance mm	: 9.97 : + 0.25	control lever
Rated speed rpm guide sleeve	: 1000	position degree : 54.0 tolerance degree : 4.0
travel mm Tolerance mm	: 5.68 : +- 0.25	control lever position degree : 118.0
Rated speed rpm guide sleeve	: 411	tolerance degree : +- 4.0 RATED SPEED
travel mm	: 2.64	
Tolerance mm	: + 0.25	rack travel mm : 10.40 Rated speed rpm : 1365
Rated speed rpm guide sleeve	: 461	Tolerance '/min : +- 5
travel mm Tolerance mm	: 3.10 : + 6.25	rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 610	rack travel mm : 0.50
travel mm	: 3.59	Folerance mm : + 0.50
Tolerance am	: + 0.25	Rated speed rpm : 1520
Rated speed rpm guide sleeve	: 1483	
travel mm Tolerance mm	: 12.00 : + 0.25	LOW IDLE

		•
control lever position degree		Pressure hPa : 130 rack travel mm : 0.25
tolerance degree	: +- 4.0	+ Tolerance mm : +- 0.05
control lever position degree tolerance degree	: 10.0 : + 4.0	
Testing:		fuel delivery characteristics
resting.		Aneroid pressure
Rated speed rpm	: 330	hPa : 1200
rack travel mm Tolerance mm	: 5.50 : + 0.10	Rated speed rpm : 1300 Del. quantity
LOCAL DIVE WIL		- cm3/1000 strokes : 125.0
Rated speed rpm	: 100	cm3/1000 strokes : +- 2.0 Check tolerance
CRT mm min.	: > 7.00	cm3/1000s. : +- 5.0
		+ Spreed
Rated speed rpm	: 450	cm3/1000 strokes : 8.0 Check tolerance
		- cm3/1000s. : 12.0
TORQUE CONTROL	-	+
.	700	Aneroid pressure
Rated speed rpm rack travel mm		+ hPa : 1200 + Rated speed rpm : 1050
Tolerance mm	: +- 0.05	Del. quantity
	-	- cm3/1000 strokes : 116.0
Rated speed rpm	: 1300	+ cm3/1000 strokes : $+$ 3.0
rack travel mm		+ Check tolerance + cm3/1000s. : + 6.0
Tolerance mm	: - 0.10	
Rated speed rpm	: 1050	Aneroid pressure
rack travel mm Tolerance mm	: 10.90	hPa : -
Tolerance mm	: +- 0.70	Rated speed rpm : 780 Del. quantity
		cm3/1000 strokes : 74.0
ANEROID/ALTITUDE	•	cm3/1000 strokes : + 1.0
COMPENSATOR TEST	•	Check tolerance
		+ cm3/1000s. : + 4.0
SETTING		BREAKAWAY
Rated speed rpm	: 1300	
Pressure hPa	: 1200	+
rack travel mm	: 11.40 - : + 0.10 -	Rack travel in mm : 10.40 Rated speed rpm : 1365
Tolerance mm	: +- 0.10	Tolerance 1/min : +- 5
MEASUREMENT	-	
Pressure hPa	:	
Rated speed rpm	: 1300	STARTING FUEL DELIVERY
rack travel mm Tolerance mm	: 8.60 - : + 0.10 -	Rated speed rpm : 100
. 000: 00100 1891	-	rack travel mm : 8.60
Rated speed rpm	: 1300	Tolerance mm : + 0.10 Del. quantity
Pressure hPa	: 650	t cm3/1000 strokes : 75.0
rack travel mm	: 2.40	cm3/1000 strokes : + 10.0
Tolerance mm	: +- 0.20	+

Check tolerance cm3/1000s. : +- 14.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16,08.95 : ISO 4113

Combination No. : 0 401 846 948

Injection pump

Pump designation : PE6P12CA32CRS32C6-1

EP type number : 0 411 826 775

Governor

Governer design. : RQ750PA783-2 Governer no. : 0 421 801 600

Cust. part No. : 864851 P07 V. 03/95

Customer—spec. information Customer : PENTA

Motor

: TWD 121 OG

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

Tolerance °C

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

208.5

Tolerance bar

40

Overflow valve : 1 457 413 010

: +- 1.5

Test lines : 1 680 750 075

80M

Outside diameter : 8.0

x inside diameter :

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 3.50 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : ← 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm : 13.30

Tolerance mm : - 0.05

Del. quantity

cm3/1000 strokes : 325.0

cm3/1000 strokes : +- 1.0

Check tolerance		+ Del. quantity	
cm3/1000s.	: 4.0	+ cm3/1000 strokes	: 325.0
		+ cm3/1000 strokes	
Spreed		- Check tolerance	
cm3/1000 strokes	: 5.0	Check tolerance cm3/1000s.	: +- 4.0
CILET TOOU SET ONCS	. 3.0	Spreed	• • • • • • • • • • • • • • • • • • • •
Check tolerance		cm3/1000 strokes	: 5.0
cm3/1000s.	: 9.0	Check tolerance	. 5.0
CHIS/ 10005.	: 9.0	+ cm3/1000s.	: 9.0
Ontrol amount our	. 700	T Chia Mada.	: 9.0
Rated speed rpm	: 300	Ť	
B - 1		Ť	
Del. quantity	20.0	2017001 15175	
cm3/1000 strokes		+ CONTROL LEVER	
cm3/1000 strokes	: - 3.0	- 	
Check tolerance		+ control lever	
cm3/1000s.	: ← 6.0	+ position degree	
Spreed		+ tolerance degree	: +- 4.0
cm3/1000 strokes	: 5.0	+	
Check tolerance		+ RATED SPEED	
cm3/1000s.	: 8.0	+	
		† rack travel mm	: 12.30
		Rated speed rpm	: 751
(B) SETTING OF IN	NECTION PUMP	+ Tolerance 1/min	
WITH GOVERNOR			
WETT GOVERNOR		+ rack travel mm	: 4.00
		+ Rated speed rpm	
GUIDE SLEEVE TRAV	/E)	+ Tolerance 1/min	
GOIDE SEEEVE THAT	, C.C.	I rocci ance minin	• •
Poted speed spe	: 757	rack travel mm	: 0.50
Rated speed rpm	: 757	+ Tolerance mm	: +- 0.50
guide sleeve	. / 05		
travel mm	: 4.85	+ Rated speed rpm	: 850
Tolerance mm	: +- 0.25	†	
		+ ASSEMBLY GOVERNOR	R SETTING
Rated speed rpm	: 510	+	
guide sleeve		+ Rated speed rpm	
travel mm	: -7.81	† rack travel mm	: 12.30
Tolerance mm	: 0.25	+	
		+ Rated speed rpm	: 783
Rated speed rpm	: 860	+ Tolerance 1/min	: +- 4
guide sleeve		🕂 💮 rack travel mm	: 4.00
travel mm	: 18.06	+	
Tolerance mm	: + 0.25	+ rack travel mm	: 0.50
	- · -	+ Tolerance mm	: +- C.50
Rated speed rpm	: 806	Rated speed rpm	: 850
guide sleeve	·	+	- -
travel mm	: 10.00	+ Rated speed rpm	: 749
Tolerance mm	: +- 0.25	+ rack travel mm	
ioterance and		+ . 301. 1. 3700 11811	
Rated speed rpm	: 860	T Rated speed rpm	: 784
	. 600	+ Tolerance 1/min	
guide sleeve	: 11.50	rack travel mm	÷ 4.00
travel mm		T rack cravet min	. 4.00
Tolerance mm	: ← 0.50	T nock thought	. 0.50
		+ rack travel mm	: 0.50
5111 1 1 AAA AAA AAA	WAT FIRE LOSS STOR	† Tolerance mm	: + 0.50
FULL LOAD DELIVER	Y AT FULL LOAD STOP	+ Rated speed rpm	: 850
	700	†	750
Rated speed rpm		+ Rated speed rpm	
Aneroid pressure		† rack travel mm	: 12.30
hPa	: -	†	-
		+ Rated speed rpm	: 785
		•	

Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm rack travel mm	
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.50
Tolerance mm	: ← 0.50
Rated speed rpm	: 850
Rated speed rpm	: 752
rack travel mm	: 12.30
Rated speed rpm	: 787
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 12.30
Rated speed rpm	: 788
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 13.30 Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm : 12.30
Rated speed rpm : 751
Tolerance 1/min : + 3

LOW IDLE

Rated speed rpm Del. quantity	: 300
cm3/1000 strokes	: 20.0 : + 3.0
Check tolerance cm3/1000s.	: +- 6.0
Spreed cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 30.01.86 : ISO 4113

Combination No. : 0 401 876 324

Injection pump

Pump designation : PE6P110A320RS492 EP type number : 0 411 816 161

Governor

Governer design. : RSV200...1000P1A305

: -3

Governer no.

: 0 421 833 208

Cust. part No. :

P02v 151085

Customer-spec. information

Customer

: VME

Motor

: TD71ACE

TEST BENCH REQUIREMENTS

Inlet line : 1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: **←** 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

N11

x inside diameter: 1.5 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

3.05 Prestroke mm : +- 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

: + 0.30Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Del. quantity

cm3/1000 strokes : 127.0

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

4.0

Spreed

cm3/1000 strokes :

4.0

Check tolerance

cm3/1000s.

7.5

rack travel mm : 4.00 Rated speed rpm : 1065 Rated speed rpm : 200 Tolerance 1/min : +- 15 Rack travel in mm: 5.00 : + 0.10 rack travel mm : 0.85
Tolerance mm : + 0.55 Tolerance mm Del. quantity cm3/1000 strokes : 19.0 Rated speed rpm : 1210 cm3/1000 strokes : \leftarrow 3.0 Spreed cm3/1000 strokes : 3.0 Check tolerance LOW IDLE cm3/1000s. 6.0 control lever position degree : 17.0 (B) SETTING OF INJECTION PUMP tolerance degree : + 4.0 WITH GOVERNOR Setting point w/out bumper spring GUIDE SLEEVE POSITION Rated speed rpm : 200 rack travel mm : 5.50 Rated speed rpm : 800 Testing: Rack travel in mm: 0.50 Rated speed rpm : 200 rack travel mm : 5.00 Tolerance mm : + 0.10 Tolerance mm : + 0.20 governor spring pre-tension rack travel mm : 2.0 Rated speed rpm : 310 2.00 click setting x: 4.25 Tolerance 1/min : +- 30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 100 Rated speed rpm : 700 Aneroid pressure hPa Del. quantity cm3/1000 strokes : 127.0 cm3/1000 strokes : +- 1.0Check tolerance : **←** 4.0 cm3/1000s. BREAKAWAY Spreed cm3/1000 strokes : 4.0 Rack travel in mm : 11.4 Rated speed rpm : 1015 11.40 Check tolerance cm3/1000s. : 7.5 Tolerance 1/min : + 5 CONTROL LEVER STARTING FUEL DELIVERY control lever position degree : 54.0 100 Rated speed rpm : tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.40 LOW IDLE Rated speed rpm : 1015
Tolerance 1/min : +-Rated speed rpm : 200

Del. quantity cm3/1000 strokes : 19.0 cm3/1000 strokes : + 3.0 Spreed cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

: 10.01.96

Combination No. : 0 402 646 618

Injection pump

Pump designation : PE6P120A720RS7283 EP type number : 0 412 626 881

Governor

Governer design. : RQV300...1100PA1061K

Governer no. : 0 421 815 345

Cust. part No. : 615.60.08.0302

Customer-spec. information Customer : SNF : WD615.46 Motor

Power KW

: 266.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 130 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 14.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: + 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.40

Tolerance mm	: - 0.05	travel mm : 2.41
Del. quantity cm3/1000 strokes	: 275.0	Tolerance mm : + 0.25
cm3/1000 strokes	: +- 1.0	+ Rated speed rpm : 490 + guide sleeve + travel mm : 3.67
Check tolerance cm3/1000s.	: + 4.0	+ Tolerance mm : + 0.25
Spreed	· 6.0	Rated speed rpm : 1390 guide sleeve
cm3/1000 strokes Check tolerance	. 6.0	+ travel mm : 13.50 + Tolerance mm : + 0.50
cm3/1000s.	: 9.0	GUIDE SLEEVE POSITION
Rated speed rpm	: 300	Rated speed rpm : 1200
Rack travel in mm Tolerance mm		Rack travel in mm: 13.00 Tolerance mm: + 1.30
Del. quantity cm3/1000 strokes	: 15.0	İ
cm3/1000 strokes		FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		+
cm3/1000s. Spreed	: + 6.0	+ Rated speed rpm : 1100 + Aneroid pressure
cm3/1000 strokes Check tolerance	: 8.0	+ hPa : 1200 + Del. quantity
cm3/1000s.	: 12.0	cm3/1000 strokes : 275.0
		+ cm3/1000 strokes : +- 1.0
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	Check tolerance cm3/1000s. : +- 4.0 Spreed
WITH GOVERNOR		+ cm3/1000 strokes : 6.0
		† Check tolerance
GUIDE SLEEVE TRAVI	EL	± cm3/1000s. : 9.0
Rated speed rpm guide sleeve	: 300	
travel mm	: 1.64	CONTROL LEVER
Tolerance mm	: ← 0.10	+
Rated speed rpm guide sleeve	: 1187	control lever position degree : 120.0 tolerance degree : + 4.0
travel mm	: 10.71	+
Tolerance mm	: ← 0.10	RATED SPEED
Rated speed rpm guide sleeve	: 829	rack travel mm : 13.40 Rated speed rpm : 1145
travel mm	: 7.03	+ Tolerance 1/min : + 5
Tolerance mm	: + 0.25	+
Rated speed rpm		+ rack travel mm : 4.00 + Rated speed rpm : 1265
	• 314	
guide sleeve	: 314	Tolerance 1/min : + 15
guide sleeve travel mm	: 1.82	+ Tolerance 1/min : + 15
guide sleeve		Tolerance 1/min : + 15 rack travel mm : 0.75
guide sleeve travel mm	: 1.82 : + 0.25	+ Tolerance 1/min : + 15

LOW IDLE	
control lever position degree tolerance degree	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.10 : + 0.10
Rated speed rpm	: 200
CRT mm min.	: > 7.60
Rated speed rpm	: 375
TORQUE CONTROL	
Rated speed rem rack travel mm Tolerance mm	: 1100 : 14.40 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.50 : + 0.10
Rated speed rpm rack travel mm Folerance mm	: 950 : 14.20 : + 0.10
Rated speed rpm rack travel mm Folerance mm	: 800 : 13.80 : ← 0.10
Rated speed rpm rack travel mm Folerance mm	: 650 : 12.80 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 14.40 : + 0.05
MEASUREMENT	
Pressure hPa	•

rack travel mm Tolerance mm	: 10.60 : + 0.10		
Rated speed rpm	: 1100		
Pressure hPa rack travel mm Tolerance mm	: 890 : 13.45 : ← 0.05		
Pressure hPa rack travel mm Tolerance mm	: 450 : 11.40 : +- 0.10		
START CUT-OUT			
Rated speed rpm Rated speed rpm	: > 100 : < 220		
Check speed 1/min	: > 80		
Check speed 1/min	: < 240		
FUEL DELIVERY CHARACTERISTICS			
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 500		
cm3/1000 strokes cm3/1000 strokes	: 262.0 : +- 3.0		
Check tolerance cm3/1000s. Spreed	: +- 6.0		
cm3/1000 strokes Check tolerance	: 8.0		
cm3/1000s.	: 12.0		
Aneroid pressure hPa Rated speed rpm	: – : 500		
Del. quantity cm3/1000 strokes cm3/1000 strokes	: 196.0 : +- 1.0		
Check tolerance cm3/1000s.	: +- 4.0		
Spreed cm3/1000 strokes	: 8.0		
Check tolerance cm3/1000s.	: 12.0		
BREAKAWAY			
Rack travel in mm Rated speed rpm Tolerance 1/min	: 13.40 : 1145 : ÷ 5		

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.60 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 120.0 cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 300
Del. quantity
cm3/1000 strokes : 15.0
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.01.96 Test oil : ISO 4113

Combination No. : 0 402 646 643

Injection pump

Pump designation : PE6P12OA72ORS7283 EP type number : 0 412 626 881

Governor

Governer design. : RQV300...1100PA1061

: -1K

Governer no. : 0 421 815 377

Cust. part No. : 615.60.08.0282

Customer-spec. information

Customer : SNF

Motor : WD615.44 Power KW : 236.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 130 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.40
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 14.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

спеск

tolerance "NW : + 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.10

Rack travet in min : 12.10

Tolerance mm	: +- 0.05	+ guide sleeve
Del. quantity		+ Tolerance mm : + 0.25
	270.0	T Total artice initi
cm3/1000 strokes	239.0	†
		+ Rated speed rpm : 480
cm3/1000 strokes	: +- 1.0	+ guide sleeve
		+ travel mm : 3.56
Check tolerance		+ Tolerance mm : + 0.25
cm3/1000s.	: +- 4.0	+
		+ Rated speed rpm : 1390
Spreed		guido chosvo
		guide sleeve
cm3/1000 strokes	: 6.0	† travel mm : 13.50
		+ Tolerance mm : $+$ 0.50
Check tolerance		- 1
	; 9.0	
cm3/1000s.	: 9.0	
		→ GUIDE SLEEVE POSITION
Rated speed rpm	: 300	+
		+ Rated speed rpm : 1250
		T Mateu speed rpm . 1250
		†
Rack travel in mm	1: 6.10	+ Rack travel in mm : 13.00
Tolerance mm	: +- 0.10	+ Tolerance mm : +- 1.30
Del. quantity		1
	. 4/ 0	Ţ
cm3/1000 strokes		
cm3/1000 strokes	: +- 3.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		+
cm3/1000s.	: +- 6.0	+ Rated speed rpm : 1100
	. + 0.0	
Spreed		+ Aneroid pressure
cm3/1000 strokes	: 8.0	+ hPa : 1200
Check tolerance		† Del. quantity
cm3/1000s.	: 12.0	+ cm3/1000 strokes : 239.0
CM3/10003.	: 12.0	
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
(B) SETTING OF IN	LIECTION PIMP	+ cm3/1000s. : +- 4.0
	0601104.04	A.
WITH GOVERNOR		Spreed
		+ cm3/1000 strokes : 6.0
		- + Check tolerance
GUIDE SLEEVE TRAV	'EI	+ cm3/1000s. : 9.0
GOIDE SEEEAE MAY	L h.	
	700	Ť
Rated speed rpm	: 300	†
guide sleeve		
travel mm	: 1.64	+ CONTROL LEVER
Tolorono mo		OOM ELEVER
Tolerance mm	: ← 0.25	T
		† control lever
Rated speed rpm	: 1171	position degree : 120.0
avide elecció		tolerance degree : + 4.0
Saide Steeve	. 10 51	Coverance degree . ' 4.0
travel non Tolerance non	: 10.51 : +- 0.25	†
Tolerance 📾	: +- 0.25	+ RATED SPEED
		∔
Datad anned	. 827	rack travel mm : 12.10
Rated speed rpm	. 023	T I GUN CI GVEL (IRI) . 12.10
guide sleeve		+ Rated speed rpm : 1145
travel mm	: 6.98	<pre>+ Tolerance 1/min : +- 5</pre>
Tolerance mm	: +- 0.25	
OCCIDING IMI	· • 0.0	
		rack travel mm : 4.00
Rated speed rpm	: 314	Rated speed rpm : 1265
guide sleeve		+ Tolerance 1/min : +- 15
travel mm	: 1.82	1
Tales and	. 1.02	
Tolerance mm	: +- 0.25	rack travel mm : 0.75
		Tolerance mm : + 0.75
Kated speed rpm	: 364	Rated speed rpm : 1350
nated speed (pill	. 557	Mada opeca i pir i 1000
		Ť

		+	rack travel mm	
		+	Tolerance mm	: ← 0.10
LOW IDLE		†	Rated speed rpm	: 1100
control lever		Ī	Pressure hPa	: 690
position degree	: 73.N	1	rack travel mm	
tolerance degree		1	Tolerance mm	
		+		
Testing:		+	Pressure hPa	: 430
		+	rack travel mm	: 11.20
Rated speed rpm	: 300	†	Tolerance mm	: +- 0.20
rack travel mm	: 0.10	†		
Tolerance mm	: +- 0.10	†	START CUT-OUT	
Rated speed rpm	: 200	I	START CUT-VUT	
Mateu speed i pili	. 200	Ī	Rated speed rpm	: > 100
CRT mm min.	: > 7.60	1	Rated speed rpm	
		1	Maron opera i p	
Rated speed rpm	: 375	+	Check	
		+	speed 1/min	: > 80
		 +	Check	
TORQUE CONTROL		+	speed 1/min	: < 240
6.4.4	. 4400	†		
Rated speed rpm		†	FUEL DELIVERY CHA	ADACTEDISTICS
rack travel mm Tolerance mm		Ī	FUEL DELIVERY CON	ARACIERISIICS
Toteranse min	. — 0.05	I	Aneroid pressure	
Rated speed rpm	: 500	1	hPa	: 1200
rack travel mm		↓	Rated speed rpm	
Tolerance mm		1	Del. quantity	
		1	cm3/1000 strokes	: 221.0
Rated speed rpm	: 950	+	cm3/1000 strokes	: 3.0
rack travel mm	: 12.90	+	Check tolerance	
Tolerance mm	: +- 0.10	+	cm3/1000s.	: +- 6.0
		+	Spreed	
Rated speed rpm		+	cm3/1000 strokes	: 8.0
rack travel mm		+	Check tolerance	40.0
Tolerance mm	: + 0.10	†	cm3/1000s.	: 12.0
Datad amaad ass	. 450	†	Anonord anonyme	
Rated speed rpm rack travel mm		†	Aneroid pressure hPa	• _
rack travel mm Tolerance mm		Ī	Rated speed rpm	500
ioteranie iiii	0.10	I	Del. quantity	. 500
		\	cm3/1000 strokes	: 196.0
AMEROID/ALTITUDE		1	cm3/1000 strokes	
COMPENSATOR TEST		1	Check tolerance	
		+	cm3/1000s.	
		+	Spreed	
SETTING		†	cm3/1000 strokes	: 8.0
	4400	†	Check tolerance	. 13.6
Rated speed rpm	: 1100	†	cm3/1000s.	: 12.0
Pressure hPa	: 1200 : 13.10	†		
rack travel mm	: + 0.05	<u>†</u>	BREAKAWAY	
Tolerance mm	0.05	Ī	DREANAWAT	
MEASUREMENT		I		
		<u> </u>	Rack travel in mm	12.10
Pressure hPa	: -	1	Rated speed rpm	
Rated speed rom	: 1100	 	Tolerance 1/man	
	-	r		

STARTING FUEL DELIVERY

100 Rated speed rpm 10.60 rack travel mm

Del. quantity

cm3/1000 strokes : 120.0 cm3/1000 strokes : \leftarrow 20.0

Check tolerance

: +- 24.0 cm3/1000s.

LOW IDLE

Rated speed rpm 300

Del. quantity

cm3/1000 strokes : 16.0 cm3/1000 strokes : +-3.0

Check tolerance cm3/1000\$.

6.0

Spreed

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.03.94 Test oil : ISO 4113

Combination No. : 0 402 646 646

Injection pump

Pump designation : PE6P13DA132D/5RS7334 EP type number : 0 412 636 826

Governor

Governer design. : RQV350...900PA760-1

Governer no. : 0 421 813 617

Cust. part No. : 76.61.028

Customer-spec. information

Customer : GUASCOR
Motor : F180,F360 T/TA

Power KW : 338.0

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TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle hoide

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed spm : 900

Rack travel in am : 13.35 Tolerance man : -- 0.05

Doi quantify

Del. quantity em3/1000 strokes : 300.5

cn3/1000 strokes : ← 1.5

Check tolerance cm3/1000s. : +- 5.0

	+ Aneroid pressure
Spreed	+ hPa : -
cm3/1000 strokes : 6.0	Del. quantity
	+ cm3/1000 strokes : 300.5
Check tolerance	+ cm3/1000 strokes : + 1.5
cm3/1000s. : 10.0	† Check tolerance
	+ cm3/1000s. : + 5.0
	+ Spreed
Rack travel in mm : 5.30	+ cm3/1000 strokes : 6.0
Tolerance mm : +- 0.20	+ Check tolerance
	+ cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP	I
WITH GOVERNOR	
	+ CONTROL LEVER
CURRE OF FRIE TRAVEL	†
GUIDE SLEEVE TRAVEL	+ control lever + position degree : 61.0
Rated speed rpm : 350	tolerance degree : + 4.0
guide sleeve	total unite degree
travel mm : 1.62	+ control lever
Tolerance mm : + 0.25	+ position degree : 117.0
	tolerance degree : + 4.0
Rated speed rpm : 957	+
guide sleeve	+ RATED SPEED
travel mm : 8.57	12.35
Tolerance mm : +- 0.25	+ rack travel mm : 12.35 + Rated speed rpm : 945
Rated speed rpm : 469	+ Rated speed rpm : 945 + Tolerance 1/min : +- 5
guide sleeve	- Toterance Irimin
travel mm : 3.42	+ rack travel mm : 4.00
Tolerance mm : + 0.25	+ Rated speed rpm : 1050
	+ Tolerance 1/min : +- 15
Rated speed rpm : 519	†
guide sleeve	rack travel mm: 0.50
travel mm : 4.07 Tolerance mm : +- 0.25	+ Tolerance mm : + 0.50 + Rated speed rpm : 1150
Toterance min . T- 0.25	T Rated speed (Mill : 1130
Rated speed rpm : 720	1
guide sleeve	
travel mm : 5.69	+ LOW IDLE
Tolerance mm : + 0.25	+
Detect speed speed 1150	t control lover
Rated speed rpm : 1150 guide sleeve	+ control lever + position degree : 67.0
travel mm : 11.50	tolerance degree : + 4.0
Tolerance mm : + 0.50	totel ance degree .
	+ control lever
	+ position degree : 12.0
GUIDE SLEEVE POSITION	+ tolerance degree : + 4.0
	†
Rated speed rpm : 950	+ Testing:
Rack travel in mm: 16.50	Rated speed rpm : 350
Tolerance mm : +- 1.30	rack travel mm : 5.30
1000 and 1100	+ Tolerance mm : + 0.20
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 250
Detect aread area a 000	+ CRT mm min. :> 6.80
Rated speed rpm : 900	T CKI mm min. 17 0.00

Rated speed rpm : 425

BREAKAWAY

Rack travel in mm : 12.35
Rated speed rpm : 945
Tolerance 1/min : + 5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Edition : 16.07.92 Test oil : ISO 4113

: 16.07.92

Combination No. : 8 482 646 967

Injection pump

Pump designation : PE6P130A720RS7150 EP type number : 0 412 636 808

Governor

Governer design. : RQV250...900PA881-1

Governer no.

: 0 421 813 982

Cust. part No. : 864988-P03 27.02.96

Customer-spec. information Customer : PENTA

: TAMD 162 C Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 675

Outside diameter : 8.0

2.5 x inside diameter :

REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm : 3.65
Tolerance mm : + 0.05 Check tolerance mm : +- 0.10 Rack travel in mm: 10.50 Tolerance mm : + 1.50 Firing order : 1-5-3-6-2-: -300 : **←** 0.30 Tolerance tolerance °NW : **←** 0.75 Start of delivery mark

x Length mm : 1000

Phasing : 0-60-120-180-240

Check

Barrel no. : 1

BASIC SETTING

Del. quantity cm3/1000 strokes : 336.0

cm3/1000 strokes : + 1.5

Check tolerance

cm3/1000s. : +-5.0

Spreed

cm3/1000 strokes : 6.0

Check tolerance cm3/1000s. 10.0

Rated speed rps : 250

Rack travel in mm : 4.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 19.5 cm3/1000 strokes : + 2.5 Check tolerance cm3/1000s. : + 5.0 Spreed cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0	Del. quantity cm3/1000 strokes : 336.0 cm3/1000 strokes : + 1.5 Check tolerance cm3/1000S. : + 5.0 Spreed cm3/1000 strokes : 6.0 Check tolerance cm3/1000S. : 10.0 CONTROL LEVER
+	control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : 118.0 tolerance degree : - 4.0
GUIDE SLEEVE TRAVEL	RATED SPEED
Rated speed rpm : 250 guide sleeve travel mm : 1.10	rack travel mm : 10.50 Rated speed rpm : 930 Tolerance 1/min : +- 5
Tolerance mm : + 0.20	rack travel mm : 4.00 Rated speed rpm : 1000
Rated speed rpm : 925 guide sleeve	Tolerance 1/min : + 15
travel mm : 7.70 + Tolerance mm : + 0.10	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1100
Rated speed rpm : 350 guide sleeve	
travel mm : 2.30 + 0.30 + 0.30	LOW IDLE
Rated speed rpm : 700 guide sleeve travel mm : 4.80 Tolerance mm : + 0.30	control lever position degree : 67.0 tolerance degree : +- 4.0
Rated speed rpm : 985 + guide sleeve +	Testing:
travel mm : 8.60 Tolerance mm : + 0.20	Rated speed rpm : 250 rack travel mm : 4.20 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	Rated speed rpm : 100
Rated speed rpm : 980	CRT mm min. :> 5.70
Rack travel in mm: 16.50 Tolerance mm: + 1.30	Rated speed rpm : 300
FULL LOAD DELIVERY AT FULL LOAD STOP	ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 700 Aneroid pressure bPa : 1000	SETTING

Rated speed rpm 500 Pressure hPa 1000 rack travel mm 11.55 Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa 500 Rated speed rpm rack travel mm 9.20 : + 0.10 Tolerance mm

Rated speed rpm 500

Pressure hPa 350 9.50 rack travel mm : + 0.10Tolerance mm

Pressure hPa 665 rack travel mm 11.25 : ← 0.05 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 700 Rated speed rpm

Del. quantity

228.0 cm3/1000 strokes : cm3/1000 strokes : +-1.5 Check tolerance

cm3/1000s. 5.0

BREAKAWAY

10.50 Rack travel in mm : Rated speed rpm : Tolerance 1/min : +-

LOW IDLE

250 Rated speed rpm

Del. quantity cm3/1000 strokes : 19.5 2.5 cm3/1000 strokes : +-

Check tolerance cm3/1000s. 5.0

cm3/1000 strokes : 5.0 Check tolerance

: 8.0 cm3/1000s.

End of test specification sheet

NZ?